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Q7TZK0 BRARE
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Q9Y124 TETING
Q9HC7 BRARE
Q14RGB TETING
Q8HC7 BRARE
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Taylor A., Battles J., Bird C.P., Ainscough R., Almeida J.P.,

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RA Banerjee R., Bates K., Beasley H., Bray-Allen S., Brown A., RA Brown J.Y., Burford D.C., Burrill W., Burton J., Camire D., RA Carter N.P., Chapman J.C., Clark S.Y., Clarke G., Clee C.M., Clegg S., RA Carter N.P., Chapman J.C., Clark S.Y., Clarke G., Clee C.M., Clegg S., RA Corby N., Coulson A., Dhami P., Dutta I., Dunn M., Faulkner L., RA Franklsh A., Frankland J.A., Garner P., Garnett J., Gribble S., RA Franklsh A., Frankland J.A., Garner B., Hammond S., Harley J.L., RA Hart E., Heath P.D., Ho T.P., Hopkins B., Horne J., Howden P.J., RA Hart E., Heath P.D., Ho T.P., Hopkins B., Horne J., Howden P.J., RA Hart E., Hynds C., Johnson C., Johnson D., Kana A., Kay M., Ra Hart E., Hynds C., Johnson D., Kana A., Kay M., Ra Hart E., Hynds C., Johnson D., Kana A., Kay M., Ra Lee H.M., Leongamornlert D.A., Laird G., Lloyd D.M., RA Lee H.M., Leongamornlert D.A., Laird G., Lloyd C., Lloyd D.M., RA Lee H.M., Leongamornlert D.A., Laird G., Lloyd C., Lloyd D.M., RA J., Wjahren S., McLay K.E., McMurray A., Myshreghi Mohammadi M., Matthews L., Milne S., Nickerson T., RA Pelan S., Phillimore B., Forter X., Mice C.M., Rogosin A., Ross M.T., RA Pelan S., Phillimore B., Forter X., Loce C.M., Rogosin A., Ross M.T., RA Pelan S., Phillimore B., Forter X., Horpe A., Torcasso W., Tracacy A., Tromans A., Tsolas J., Wall M., Walsh J., Wang H., RA Weinstock K., West A.P., Willey D.L., Whitehead S.L., Wilming L., RA Weinstock K., West A.P., Willey D.L., Whitehead S.L., Wilming L., RA Weinstock K., West A.P., Willey D.L., Whitehead S.L., Wilming L., RA Weinstock K., West A.P., Willey D.L., Whitehead S.L., Wilming L., The DNA sequence and comparative analysis of human chromosome 10."; The DNA sequence and comparative analysis of human chromosome 10."; The DNA sequence and comparative analysis of human chromosome 10.";
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RA Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
RA Altechul S.F. Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
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RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
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RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards J., Hulton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
"Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:1889-16903 (2002)
EMBL; AF017988; AAB70794.1; -; mRNA.
EMBL; AF117758; AAD25052.1; -; mRNA.
EMBL; CR596705; -; NOT_ANNOTATED_CDS; mRNA
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as long a
                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: Soluble frizzled-related proteins (sFRPS) function as modulators of wnt signaling through direct interaction with wnts. They have a role in regulating cell growth and differentiation in specific cell types. SFRPS may be involved in determining the polarity of photoreceptor, and perhaps, other cells in the retina SUBCELFULAR LOCATION: Secreted (By similarity). TISSUE SPECIFICITY: Highly expressed in the retinal pigment epithelium (RPE) and pancreas. Weak expression in heart, liver and
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SIMILARITY: Contains 1
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tes K., Beasley H., Bray-Allen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000024;
InterPro; IPR001134;
                                                                                                                                                                 BOVIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENSG00000120057;
NC:10779; SFRP5.
                                                                                                                                                                                                                                                                               YPCSLYYPFFYGAAEPH
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                                                                                                                                                                                                                                                                                                                                                            KRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFS
                                                                                                                                                                                                                                                                                                                                                                                                                      CAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKI
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                                                                                                                                                                                                                                                     YPCSLYYPFFYGAAEPH
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Netrin_C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                            Last sequence update)
Last annotation update)
                                                                                                       Created)
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                                           protein
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By similarity.
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Pred. No. 1.5e-149;
D; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                       LAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OSF1FCCCB614F36A CRC64;
                                           precursor
                                                                                                                                                315
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                                             (gFRP-5).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chang J.T., Esumi N., Moore K., Li Y., Zhang S., Chew C., Goodman B. Rattner A., Moody S., Stetten G., Campochiaro P.A., Zack D.J.; "Cloning and characterization of a secreted frizzled-related protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pecora; Bovidae;
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Retinal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMART; SM00643; C345C; 1.
SMART; SM00063; FRI; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Retinal pigment epithelium;
PubMed=10072424; DOI=10.1093/hmg/8.4.575;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000024;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: Soluble frizzled-related proteins (sFRPS) function as modulators of Wnt signaling through direct interaction with Wnts. They have a role in regulating cell growth and differentiation in specific cell types. SFRP5 may be involved in determining the polarity of photoreceptor, and perhaps other, cells in the retina. Inhibits Wnt8 signaling, in vitro. SUBCELLULAR LOCATION: Secreted (Probable). TISSUE SPECIFICITY: Strongly expressed in the retinal pigment epithelium (RPB). Weak expression in retina, brain, heart, liver, kidney, testis and muscle. DOWAIN: The FZ domain is involved in binding with Wnt ligands (By not the content of the probability of the strongly expression in retina, brain, heart, liver, kidney, testis and muscle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: Contains 1 SIMILARITY: Contains 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  similarity).
SIMILARITY: Belongs to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (sFRP)
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                                                            65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF01392; Fz; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF117757; AAD25051.1; -; mRNA.
                                                                                                                                                                         ຫ
                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      expressed by the retinal pigment epithelium."; l. Genet. 8:575-583(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS50038; FZ; 1.
PS50189; NTR; 1
TVGYKRWRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIYPC
                                                                                                                                                AAAGGVRTAALALLLGALHWAPARCEEYDYYGWQAEPLHGRSYSKPPQCLDIPADLPLCH
                                                      TVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIYPC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR001134;
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                                                                                                                                                                                                                                     Conservative
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                                                                                                                                                                                                                                                             95.7%;
97.4%;
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Differentiation; Signal; Wnt signaling pathway
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                                                                                                                                                                                                                                                                                                                                                     WW;
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NTR domain.
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                                                                                                                                                                                                                                                                                                                                                                             y similarity
                                                                                                                                                                                                                                                                                                                                                     8B6E94951060A976
                                                                                                                                                                                                                                     Mismatches
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                                                                                                                                                                                                                                                                1656;
No. 8
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es 8;
                                                                                                                                                                                                                                                                                           BB
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                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                           Length
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Zack D.
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                                                                                                                                                                                                                                                                                                                                                                            RC STRAIN=C57BL/6J; TISSUE=Mammary gland;

RM MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Stapleton M., Ogarin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Stapleton M., Oguellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., Moßwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,

RA Robask S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
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Q9WU66; Q8KZ69;

10-MAY-2005 (Rel. 47, Creat;

10-MAY-2005 (Rel. 47, Last;

10-MAY-2005 (Rel. 47, Last;

Secreted frizzled-related p;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chang J.T., Esumi N., Moore K., Li Y., Zhang S., Chew C., Goo Rattner A., Moody S., Stetten G., Campochiaro P.A., Zack D.J. "Cloning and characterization of a secreted frizzled-related that is expressed by the retinal pigment epithelium."; Hum. Mol. Genet. 8:575-583(1999).
and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16999-16903(2002).

Proc. Natl. Acad. Sci. U.S.A. 99:16999-16903(2002).

Proc. Natl. Acad. Sci. U.S.A. 99:16999-16903(2002).

Proc. Natl. Acad. Sci. U.S.A. 99:16909-16903(2002).

In Comparity of What signaling through direct interaction with Whats. They have a role in regulating cell growth and differentiation in specific cell types. SFRPS may be involved in determining the polarity of photoreceptor, and perhaps, other cells in the retinal polarity of photoreceptor, and perhaps, other cells in the retinal SUBCELLULAR LOCATION: Secreted (By similarity).

-!- DOMAIN: The FZ domain is involved in binding with What ligands (By similarity).

-!- SIMILARITY: Belongs to the secreted frizzled-related protein
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Chang J.T., Esumi N., Moore K., Li Y., Zhang S.,
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Muroidea; Muridae; Murinae;
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Euarchontoglires; Glires; Rodentia;
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RESULT 4
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Interpro; IPR000024; Fz domain.
Interpro; IPR001134; NeTrin_C.
Pfam; PF01392; Fz; 1.
Pfam; PF01759; NTR; 1.
SMART; SM00063; C345C; 1.
SMART; SM00063; FRI; 1.
PROSITE; PS50189; NTR; 1.
PROSITE; PS50189; NTR; 1.
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between the Swiss Institute of Bioinformatics and the EMBL
the European Bioinformatics Institute. There are no restrict
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SIMILARITY: Contains 1
SIMILARITY: Contains 1
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35382 MW;
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94.9%;
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NTR domain.
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RC TISUBEEDDO PROPERTY PubMed=12477932; DOI=10.1073/pnas.242603899; RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., RX Strausberg R.L., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., RX Alausner R.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K., RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., RA Altechuko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., RA Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C., RA Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C., RA Brownstein M.J., McKernan K.J., Abramson R.D., Mullahy S.J., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.W., RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Hullyk S.W., RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., RA Hahting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Mitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., RA Mitting M., Marra M.A., Schmerch A., Schein J.E., Jones S.J.M., Marra M.A., "Group B.D., Dickson M.C., RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., RA Grotiquez A.C., Grimwood J., Schmutz J., Myars R.M., "Grothann and initial analysis of more than 15,000 full-length human RT and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 203; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF01392; Fz; 1.
Pfam; PF01759; NTR; 1.
SMART; SM00643; C236C; 1.
SMART; SM00063; FRI; 1.
PROSITE; PS501038; FZ; 1.
PROSITE; PS501039; NTR; 1.
SEQUENCE 315 AA; 36455 MW; 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Klein S., Gerhard D.S.;
MRNA.

EMBL; BC074661; AAH74661.1; -; mRNA.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0016020; C:membrane receptor activity;
GO; GO:0007275; P:development; IEA.
GO; GO:0016055; P:Mrt receptor signaling pathway; I
InterPro; IPR000024; Fz domain.
InterPro; IPR001134; Netrin_C.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
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                                                                                                                                                                                                                       NLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIYPCRSLCEAVRAG
                                                                                                                           CAPIMEAYGFPWPEMIHCHKFPLDNDLCIAVQFGHLPATAPPVTKICAQCEMEHSADGIM
                                                                                                                                                                                                                                                                                                                                                                                                       ALLIGALHWAPARCEEYDYYGWQAEPL-HGRSYSKPPQCLDIPADLPLCHTVGYKRMRLP
EQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTKRLVLHMKNGAGCP
                                                                                                                                                                                                                                                                                                                                                                SLILGLVLWSSA--BEYDYYSWQSDNFQNGRFYTKQSQCIDIPSDLHLCHNVGYKKMRLP
                                                                                        CAPVMESYGFPWPEMLNCNKFPLDNDLCITVQFGSKQVTQPPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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70.0%;
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Pred. No. 1.7e-97
7; Mismatches 3
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RESULT 6
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Q640J3 XENLA PRELIMINARY;
ID Q640J3;
AC Q640J3;
DT 25-OCT-2004 (TremBLrel. 28,
DT 25-OCT-2004 (TremBLrel. 28,
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Best Local S
Matches 202
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GO; GO:0004888; F:transmembrane receptor activity; IEA.
GO; GO:0007275; P:development; IEA.
GO; GO:0007275; P:Wnt receptor signaling pathway; IEA.
InterPro; IPR001024; Fz domain.
InterPro; IPR001134; Fz domain.
Pfam; PF01392; Fz; 1.
Pfam; PF01392; PTR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF01759; NTR; 1.
SMART; SM00643; C345C; 1.
SMART; SM00063; FR; 1.
PROSITE; PS50038; FZ; 1.
PROSITE; PS50189; NTR; 1.
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EMBL; AY164461; AAN87352.1; -; mRNA.
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MEDLINE=22505169; PubMed=12617827; DOI=10.1016/S1567-133X(02)00023-6;
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Amphibia; Batrachia; Anura; Mesobatrachia;
Xenopodinae; Xenopus; Xenopus.
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01-MAR-2003 (TrEMBLrel. 23, Last sequence up
01-OCT-2003 (TrEMBLrel. 25, Last annotation
Secreted frizzled-related protein 5.
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QBAWG4;
01-MAR-2003 (TrEMBLrel. 2:
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CPQLDNLSGSFLIMGRKVDNKLILTAIYKWDKKSKDMKYAVNFMYSYPCS
                                                                                                                                                                                                                           CAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKICAQCEMEHSADGLM 194
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                                                                                                                                                                                                                                                                                                                     SVLLGLVLWSSA--EEYDYYSWQSDNFQNGRFYTKQSQCIDIPSDLHLCHNVGYKKWRLP
                                                                                                                                                                                    EQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTKRLVLHMKNGAGCP
                                                                                                                                                                                                            CAPVMESYGFPWPEMLNCNKFPLDNDLCITVQFGSKQVTQPPVTKICTQCEIEQKSETMR
                                                                                                                                                           VQLCASDFVLRMRIKEVKIENGDRKLIAAQKKKKVLKAGKLKRKEFRKLVLYIKNAASCP
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 28,
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 Last sequence update)
            Created)
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Pred. No. 3.2e
                                         PRT;
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A Strausberg R.L., Feingold E.A., Grouse I.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Haleh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Holeh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

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A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Wadan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gay L.J., Hulyk S.W.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Richards S., Wanger D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Richards S., Wanger D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Richards S., Wanger D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Bosak S.A., McZey D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Richards S., Wanger D.M., Sodergren E.J., Lu X., Gibbs R.A.,

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Bosak S.A., McZey D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Bosak S.A., McZey D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Bosak S.A., McZey D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Bosak S.A., McZey D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Bosak S.A., McZey D.M., Sodergren E.J., L
                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 202; Conserv
                                                                                                                                                                                                                                                                                                                    Pfam; PF01392; FZ; 1.
Pfam; PF01759; NTR; 1.
SMART; SM00643; C34SC; 1.
SMART; SM00063; FRI; 1.
PROSITE; PS50038; FZ; 1.
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Submitted (SEP-2004) to the EMBL/GenBank/DDBJ database;
EMBL; BCO82632; AAH82632.1; -; mRNA.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0016088; F:transmembrane receptor activity; IEA.
GO; GO:0007275; P:development; IEA.
GO; GO:0007275; P:development; IEA.
GO; GO:0016055; P:Mat receptor signaling pathway; IEA.
InterPro; IPR000024; Fz_domain.
InterPro; IPR001134; Netrin_C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus; Xenopus.
                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                     PROSITE;
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LOC494659 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-Spleen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Genetic and genomic tools for Xenopus research: The NIH Xenopus initiative.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=8355;
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                                         75
                                                                                        13
                                                                                                                                      16
                                                                                     NLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIYPCRSLCEAVRAG
                                                                                                                                                                                                                                                                                                       PS50189; NTR;
NLLDHETMPEVKQQASSWVPLLAKQCHRDTQLFLCSLFAPICLERPIYPCRSLCEVVRDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        225:384-391 (2002) .
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                                                                                                                                                                                                                                                                            315 AA;
                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                               36445 MW;
                                                                                                                                                                                                      66.8%;
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                                                                                                                                                                                    48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ databases
                                                                                                                                                                                  Score 1155.5; DB
Pred. No. 4.8e-97;
8; Mismatches 37
                                                                                                                                                                                                                                                                               103E7BF4B957C035 CRC64;
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                                                                                                                                                                                       Indels
                                                                                                                                                                                                                              Length 315;
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RA Mauceli E., Bouneau L., Fischer C., Ozout-Costaz C., Bernot A.,
RA Micaud S., Jaffe D., Fishers S., Lutfalla G., Dossat C., Segurens B.,
RA Micaud S., Jaffe D., Fishers S., Dutfalla G., Dossat C., Segurens B.,
RA Anthouard V., Jubin C., Castelli V., Katinka M., Vacherie B.,
RA Anthouard V., Jubin C., Castelli V., Katinka M., Vacherie B.,
RA Anthouard V., Jubin C., Cattollico L., Poulain J., De Berardinis V.,
RA Cruaud C., Duprat S., Brottier P., Coutanceau J.P., Gouzy J.,
RA Parra G., Lardier G., Chapple C., McKernan K.J., McEwan P., Bosak S.,
RA Ralis M., Volff JN., Guigo R., Zody M.C., Mesirov J.,
RA Kellis M., Volff JN., Guigo R., Zody M.C., Mesirov J.,
RA Lindblad-Toh K., Birren B., Nusbaum C., Kahn D., Robinson-Rechavi M.,
RA Laudet V., Schachter V., Quetier F., Saurin W., Scarpelli C.,
Wincker P., Lander E.S., Weissenbach J., Roest Crollius H.;
"Genome duplication in the teleost fish Tetraodon nigroviridis reveals
the early vertebrate proto-karyotype.";
Nature 431:946-957 (2004).
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 201
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Bukaryota; Metazoa; Chordata; Cranitata; Vertebrata; Euteleostom
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleost.
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetradontoidea; Tetraodontidae; Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORFNames=GSTENG00016514001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-SEP-2005 (TrEMBLrel. : 13-SEP-2005 (TrEMBLrel. : Chromosome 17 SCAF14563,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q4SKX3_TETNG
Q4SKX3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ whole genome preliminary data.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEOTIDE SEQUENCE.

JECOPE, Whitehead Institute Centre for Genome Research;

Ditted (FEB-2004) to the EMBL/GenBank/DDBJ databases.

CAUTION: The sequence shown here is derived from an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TaxID=99883;
136
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                                                  SLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKICAQCE
                                                                                                          VGYKKMRLPNLLDHETMAEVKQQAGSWVPLLAKRCHADTQVFLCSLFAPVCLDRPIYPCR
                                                                                                                                     VGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIYPCR
                                                                                                                                                                                                                        APGLSVFSLLLLITVSVA----DEYDYYSWQSDNFHNGRFYTKQPQCVDIPVDLRLCHN
                                                                                                                                                                                                                                                                             AGGVRTAALALLLGALHWAPARCEEYDYYGWQAEPLH-GRSYSKPPQCLDIPADLPLCHT
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                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         36657 MW;
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                                                                                                                                                                                                                                                                                                                                                                   63.8%;
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31, Last sequence update)
31, Last annotation update)
, whole genome shotgun sequence.
                                                                                                                                                                                                                                                                                                                                        41;
                                                                                                                                                                                                                                                                                                                                                                   Score 1104.5;
Pred. No. 2.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                         3060A2F9AD478156
                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    shotgun (WGS)
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Euteleostei; Neoteleostei;
                                                                                                                                                                                                                                                                                                                                                                      .3e-92;
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                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                                        58;
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                                                                                                                                                                                                                                                                                                                                        Indels
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RESULTANCE BESIDENT OF PRINCIPAL SERVICES OF
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RA Klausner R.D., Collins F.S., Wagner L., Schenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Rillalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pathey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Raha S.C., Nowadan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Raha S.C., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Raha S.C., Grimwood J., Schmutz J., Myers R.M.,
RA Raha S.S., K., Krzywinski M.I., Skalska U., Smailus D.E.,
Teneration and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniform Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-UUL-2004 (TrEMBLrel. 27, Create 05-UUL-2004 (TrEMBLrel. 27, Last & 10-MAY-2005 (TrEMBLrel. 30, Last & 5ecreted frizzled-related protein
Pfam; PF01392; Fz; 1.
Pfam; PF01759; NTR; 1
SMART; SM00643; C345C
                                                                                                                                                      GO; GO:0016020; C:membrane; IEA.
GO; GO:000488; F:transmembrane receptor
GO; GO:0007275; P:development; IEA.
GO; GO:0016055; P:Wnt receptor signaling
                                                                                                                                                                                                                                                                                EMBL; AY050560; AAL11439.1; -; mRNA.
EMBL; BC085455; AAH85455.1; -; mRNA.
ZFIN; ZDB-GENE-011108-2; sfrp5.
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Q6YNR8;
                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                               Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                      NIH MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Larvae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas
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                                                                                        InterPro; IPR000024; Fz_domain.
InterPro; IPR001134; Netrin_C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.A.
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STREET HUMAN

STREET HUMAN

QBN474; 000546; 014779;

T 10-MAY-2005 (Rel. 47, Created)

T 10-MAY-2005 (Rel. 47, Last sequence update)

JT 13-SED-2005 (Rel. 48, Last annotation update)

Secreted frizzled-related protein 1 precursor (formation update)

Secreted frizzled-related protein 1 precursor (formation update)

CARP2;
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Best Local S
Matches 197
                                                                                                                                                                                                                                           TISSUE-Embryonic lung fibroblast, where the sequence OF 39-78 MEDLINE-97338093; PubMed=9192640; DOI=10.1073/pnas.94.13. Finch P.W., He X., Kelley M.J., Uren A., Schaudies R.P., Rudikoff S., Aaronson S.A., Varmus H.E., Rubin J.S.; "Purification and molecular cloning of a secreted, Frizzlantagonist of Wnt action."; Proc. Natl. Acad. Sci. U.S.A. 94:6770-6775(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00063; FRI; 1.
PROSITE; PS50038; FZ; 1.
PROSITE; PS50189; NTR; 1
                                                                   Zhou Z., Wang J., Han X., Zhou J
"Up-regulation of human secreted
                                                                                                                                      Melkonyan H.S., Chang W.C., Shapiro J.P., Mahadevappa M., Fitzpatrick P.A., Kiefer M.C., Tomei L.D., Umansky S.R.; "SARPs: a family of secreted apoptosis-related proteins.", proc. Natl. Acad. Sci. U.S.A. 94:13636-13641(1997).
                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
  TISSUE=Brain
                                                       down-regulation in breast
                                                                                              PubMed=9724099
                                                                                                           NUCLEOTIDE SEQUENCE [MRNA], AND
                                                                                                                                                                                             MEDLINE=98054286; PubMed=9391078; DOI=10.1073/pnas.94.25.13636;
                                                                                                                                                                                                             TISSUE=Heart
               NUCLEOTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAALALLIGALHWAPARCEEYDYYGWQAEPLH-GRSYSKPPQCLDIPADLPLCHTVGYKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFSYPCSLYYPFF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKICAQCEMEHSA
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               SEQUENCE
                                                                                                                                                                                                                       SEQUENCE [MRNA], AND TISSUE
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                                                                                                                                                                                                                                                                                                                                                                                                                               (Human)
                                        78:95-99 (1998)
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               (LARGE SCALE MRNA)
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65.7%;
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Pred. No. 5
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                                                                   Linder
rizzled
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                                                                                                                                                                                                                        SPECIFICITY
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                                                                   apoptosis
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protein 2)
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RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Hopkins R.F., Jordan H., Moore T., Max, Rubin G.M., Hong L.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., WcEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Marra M.A.,
"Generation and initial analysis of more than 15,000 full-length human
"Generation and initial analysis of more than 15,000 full-length human
"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                         unrelated to proliferative activity.";

J. Clin. Endocrinol. Metab. 87:1729-1736(2002).

-!- FUNCTION: Soluble frizzled-related proteins (sFRPS) function as modulators of Mnt signaling through direct interaction with Wnts. They have a role in regulating cell growth and differentiation in specific cell types. SFRP1 decreases intracellular beta-catenin levels (By similarity). Has antiproliferative effects on vascular cells, in vitro and in vivo, and can induce, in vivo, an angiogenic response. In vascular cell cycle, delays the G1 phase and entry into the S phase (By similarity). In kidney development, inhibits tubule formation and bud growth in metanephroi (By similarity). Inhibits MNTI/MNT4-mediated TCF-dependent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fukuhara K., Kariya M., Kita M., Sh
Orii A., Fujita J., Fujii S.;
"Secreted frizzled related protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTERACTIONS WITH WNT1; WNT2 AND FRZD6.
PubMed=10347172; DDI=10.1074/jbc.274.3.16180;
Bafico A., Gazit A., Pramila T., Finch P.W., Yaniv A., Aaronson
"Interaction of frizzled related protein (FRP) with Wnt ligands
the frizzled receptor suggests alternative mechanisms for FRP
inhibition of Wnt signaling.";
J. Biol. Chem. 274:16180-16187(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROTEIN SEQUENCE OF 32-314, DISULFIDE BONDS, MASS SPECTROMETRY, N-LINEED GLYCOSYLATION, AND MUTRGENESIS OF ASN-173 AND ASN-263. PubMed=11741940; DOI=10.1074/jbc.M108533200; Chong J.M., Ueren A., Rubin J.S., Speicher D.W.; "Disulfide bond assignments of secreted Frizzled-related protein-1 provide insights about Frizzled homology and netrin modules."; J. Biol. Chem. 277:5134-5144(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SUBUNIT: Inter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=11932307; DOI=10.1210/jc.87.4.1729;
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Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           leiomyomas, associated with a high estrogenic
                                           matrix-associated. Released by heparin-binding.
TISSUE SPECIFICITY: Widely expressed. Absent from lung, liver and peripheral blood leukocytes. Highest levels in heart and fetal kidney. Also expressed in testis, ovary, fetal brain and lung, leiomyomal cells, myometrial cells and vascular smooth muscle cells. Expressed in foreskin fibroblasts and in keratinocytes. INDUCTION: Down-regulated in colorectal and breast tumors. Upregulated in uterine leiomyomas under high estrogenic conditions. Expression, in leiomyomal cells, also increased both under hypoxic and serum deprivation conditions.

DOMAIN: The FZ domain is involved in binding with Wnt ligands (By
                                                                                                                                                                                                                                                                                                                                                       SUBUNIT: Interacts with WNT1, WNT2 and FRZD6. Interacts with WNT4 and WNT8 (By similarity).
SUBCELLULAR LOCATION: Secreted. Cell membrane or extracellular
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SPECTROMETRY:

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DOMAIN
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SMART; SM00063; FRI; 1.

PROSITE; PS50038; FZ; 1.

PROSITE; PS50189, VTR; 1.

Developmental protein; Differentiation; Direct protein Clycoprotein; Signal; Wnt signaling pathway.

CTON:
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SIGNAL
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Pfam; PF01759; NTR; 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ensembl; ENSG00000104332;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               removed.
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MISCELLANBOUS: May have therapeutic use in cardiac sustintiality: Belongs to the secreted frizzled-related (sFRP) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: Contains 1 FZ (frizzled) SIMILARITY: Contains 1 NTR domain.
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AF017987; AAB70793.1; -;
AF056087; AAC12877.1; -;
BC036503; AAH36503.1; -;
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Q61091; 1IJY
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IKKKDLKKLVLYLKNGADCPCHQLDNLSHHFLIMGRKVKSQYLLTAIHKWDKKNKEFKNF
                           LKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFA
                                                         CLDRPIYPCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCIAMTPPNATEASK
                                                                                                                                       CLDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATA
                                                                                                                                                                                  I PADLRLCHNVGYKKMVLPNLLEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFAPV
                                                                                                                                                                                                      IPADLPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPV
                                                                                                                                                                                                                                                                            MRAAAAAGGVRTAALALL--LGALHWAPARCEEYDYYGWQAE--PLH-GRSYSKPPQCLD
                                                                                                                                                                                                                                             MGIGRSEGGRRGAALGVLLALGAALLAVGSASEYDYVSFQSDIGPYQSGRFYTKPPQCVD
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Netrin_C.
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N->Q: No effect on molecular weight.
Missing (in Ref. 1 and 3).
A -> P (in Ref. 2).
; 29DD948706EB7143 CRC64;
                                                                                                                                                                                                                                                                                                       Score 924.5; DB 1;
Pred. No. 6.3e-76;
1; Mismatches 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-linked (GlcNAc. .
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SFRP1_BC
019116;
EMBL;
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-!- SIMILARITY: Contains 1 NTR domain.
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Duplas C., Jaspard B., Moreau C., D'Amore E
"Identification and cloning of a secreted p
cysteine-rich domain of frizzled: evidence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-MAY-2005 (Rel. 47, Created)
10-MAY-2005 (Rel. 47, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
Secreted frizzled-related protein 1 precursor
                                                                                                                                                                                                                                                                           similarity).
-!- SIMILARITY: Belongs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transcription.
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NCBI_TaxID=9913;
                                                                                                                the European
                                                                                                                                                                                                                                                                                                                      sinuses.
-!- DOMAIN: The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=SFRP1; Synonyms=FRZA;
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BOVIN
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                                                                                          use as
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: Soluble frizzled-related proteins (sFRPS) function as modulators of Wnt signaling through direct interaction with Wnts. They have a role in regulating cell growth and differentiation in specific cell types. SFRP1 decreases intracellular beta-catenin levels (By similarity). Has antiproliferative effects on vascular cells, in viro and in vivo, and can induce, in vivo, an angiogenic response. In vascular cell cycle, delays the G1 phase and entry into the S phase (By similarity). In kidney development, inhibits tubule formation and bud growth in metanephroi (By similarity). Inhibits WNT1/WNT4-mediated TCF-dependent
                                                                                                                                                                                                                                                                                                                                                               spleen and eye. Lower levels in lung, brain and kidney. Weak expression in liver, skeletal muscle and the medial layer of the aorta. In the cortical brain, localized to neurons and small blood vessels. In the retina, localized to the inner and outer nuclear layers with high expression in the neuronal cell bodies. In the heart, restricted to myocytes. In lung, highest expression found in the epithelium of terminal bronchioles. In kidney, localized to the epithelium of collecting ducts of the medulla and, in spleen, expression restricted to the red pulp in cells associated with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               matrix-associated. Released by heparin-binding. TISSUE SPECIFICITY: Highest levels in sortic endothelium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            similarity).
SUBCELLULAR LOCATION: Secreted. Cell membrane
                                                                                                             Swiss-Prot entry is copyright. It is produ
een the Swiss Institute of Bioinformatics
European Bioinformatics Institute. There a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     growth control.";
. Res. 84:1433-1445(1999).
                                                                                                                                                                                                                                                        (eFRP)
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U85945; AAB67062.1; -; Q61091; 11JY.
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Pfam; PF01759; NTR; 1.
SMART; SM00643; C34SC; 1.
SMARR; SM00063; FRI; 1.
PROSITE; PS50038; FZ; 1.
PROSITE; PS50189; NTR; 1.
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STRAIN=C57BL/6; TISSUE=Brain; MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler
                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
Muridae; Murinae; M
                                                                  NUCLEOTIDE SEQUENCE
                                                                                                                                                            Mus musculus (Mouse)
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57.1%;
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Pred. No. 1.2e
18; Mismatches
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N-linked
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No. 1.2
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        G.D.,
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    RESULT 12
SFRP1 MOUGE
ID SFRP1
AC QBC4U
AC QBC4U
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DT 10-M2
DT 10-M2
DT 10-M2
DT Mamma
OC Musen
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OX NCB1
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Eukaryota; Metazoa; C Mammalia; Eutheria; E Muroidea; Muridae; Mu NCBI_TaxID=10090;

; Chordata; Craniata; Vertek; Euarchontoglires; Glires; Murinae; Mus.

Vertebrata; Euteleostomi;

(sFRP-1)

Rodentia;

Sciurognathi;

Mus musculus (Mouse)

NUCLEOTIDE SEQUENCE [MRNA], AND TISSUE STRAIN=C57BL/6J; TISSUE=Embryonic eye; MEDLINE=97250455; PubMed=9096311; DOI=1

DOI=10.1073/pnas.94.7.2859; SPECIFICITY

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RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Distchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., WcEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Milting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
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RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J.M., Marra M.A.;
RA Rodriguez C.,
RA Rodriguez R.W., Touchman J.W.,
RA RODRIGUEZ R.G.,
RA Rodriguez C.,
RA Rodriguez R.W., Touchman J.W.,
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RA Rodriguez R.W., Touchman J.W.,
RA RODRIGUEZ R.G.,
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Best Local S
Matches 174
MOUSE
STRANDARD; PRT; 314 AA.
SFRP1 MOUSE STANDARD; PRT; 314 AA.
Q8C4U3; 008861; Q8R1J4;
10-MAY-2005 (Rel. 47, Created)
10-MAY-2005 (Rel. 47, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
10-MAY-2005 (Rel. 47, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6;
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NCE 314 AA; 35412 MW;
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Pred. No. 1.7e
50; Mismatches
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W; 3D98A15127DFA421
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.7e-74;
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A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Laspleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

A Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Whiting M., Touchman J.W., Green B.D., Dickson M.C.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Shevchenko Y., Smailus D.E.,

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

RA Generation and initial analysis of more than 15,000 full-length human

RT and mouse cDNA sequences.",

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Agi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
Blake J.A., Bradt D., Brusic V., Godzik A., Frazer K.S.,
Gassterland T., Gariboldi M., Gissi C., Godzik A., Frazer K.S.,
Gasterland T., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
KA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
KA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
KA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
KA Kanai A., Kawaji H., Kawasawa Y., Lenhard B., Lyons P.A.,
Magashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
A Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
Retrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
A Ravasi T., Reed J.C., Reed D.J., Ring B.Z., Ringwald M.,
A Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
A Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
A Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang I.,
A Wilming L.G., Wynshaw-Boris A., Yangajsawa M., Yang I., Yang L.,
A Wilming L.G., Wynshaw-Boris A., Yangajsawa M., Sakazume N., Sato K.,
A Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
A Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
A Hira A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
A Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
A Hara A., Hashizume W., Satoki V., Sabaki D., Shibata K., Shinagawa A.,
A Hara A., Hashizume W., Satoki V.,
                                                                                                                                     PubMed=15306229; DOI=10.1016/j.cardiores.2004.05.006; Ezan J., Leroux L., Barandon L., Dufourcq P., Jaspard B., Moreau Allieres C., Daret D., Couffinhal T., Duplaa C.; "FrzA/sFRP-1, a secreted antagonist of the Wnt-Frizzled pathway, controls vascular cell proliferation in vitro and in vivo."; Cardiovasc. Res. 63:731-738(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattner A., Hsieh J.-C., Smallwood P.M., Gilbert Jenkins N.A., Nathans J.;
"A family of secreted proteins contains homology ligand-binding domain of frizzled receptors.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Birney E., Hayashizaki Y.;
"Analysis of the mouse transcriptome based on functional annotation of 60,70 full-length cDMAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa
Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobor
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PubMed=9739103; DOI=10.1016/S0925-4773(98)00072-0
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buse L.H., Derge J.G.,
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Gojobori T.,
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su N.,
Sato K.,
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TREEDE (By similarity).

11 SUBCELULAR LOCATION: Secreted. Cell membrane or extracellular matrix-associated. Released by heparin-binding (By similarity).

12 TISSUE SPECIFICITY: Highly expressed in kidney and embryonic heart. Also highly expressed in the eye, where it is principally localized to the ciliary body and the lens epithelium. Weaker expression in heart, lung and brain. In the brain, is expressed exclusively in the choroid plexus.

12 DEVELOPMENTAL STAGE: In the developing kidney expressed at 13.5 dpc in the periphery of the metanophros and surrounding the uretic and nephrosquare tubules. At 14.5 dpc, expression decreases in the outer cortical cells and becomes viable in the tubular parts of the nephron From 15.5 dpc, highly expressed in the future loops of Henle. In the developing CNS, expression located to the forebrain and hindbrain. At 8.0 dpc, expressed in the future forebrain and hindbrain with additional expression at 9.5 dpc expression is maintained in these tissues with a strong signal in rhombomere 4. Until 11.5 dpc, expression at 9.5 dpc and 10.5 dpc, in the nasal and epibranchial placodes. In the forebrain, initial expression is found in the proencephalon of the forebrain, and then strong expression in the proencephalor of the forebrain, initial expression is tone from the proencephalor of the prospection of the syression, by 10.5 dpc, is expression in the proencephalor of the prospection of the syression, by 10.5 dpc, in medial nasal pactodemal cells overlying the dorsal part of the optic cup. In later stages, expression in the enterior part of the expression is confined to the anterior part of the lens. During limb developing the dorsal part of the spiral limb developing the dorsal part of the spiral limb and the future pigmented retinality of the developing the dorsal part of the mesenchyme and the highest levels at 15.5 dpc, and 16.5 dpc in the mesenchyme and the dental epithelium. Also expressed in derveloping the dorsal part of the salivary gland. In the developing means the salivary
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"Developmental expression patterns of mouse sFRP
members of the secreted frizzled related protein
Mech. Dev. 75:29-42(1998).
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common ventricular and atrial chamber of the developing heart, in the aortic sac and in the sinus venosus. High expression found in the from 11.5 dpc-12.5 dpc, in the trabeculated wall of the ventricular chamber together with the wall of the atrial chamber. Expression also found in the muscular part of the interventricular septum. From 9.5 dpc-11.5 dpc expression in the visceral yolk sac confinded to the inner lining endothelial cell layer. Expression in the developing heart decreases after 14.5 dpc.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90:263-267 (2000)
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T., Dufourcq P., Moreau C.,
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sFRP-1 and mWnt-8 gene during heart
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family.";
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secreted frizzled-related

protein

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RESULT 13
Q6GZK1 CRYLA
ID Q6GZK1_CRYLA PRELIMINARY;
AC Q6GZK1;
DT 05-JUL-2004 (TrEMBLrel. 27,
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InterPro; IPR000024; Fz_domain.
InterPro; IPR001034; Netrin_C.
Pfam; pP01392; Fz; 1.
Pfam; pP01759; NTR; 1.
SMART; SM00643; C345C; 1.
SMART; SM00063; FRI; 1.
PROSITE; PS50189; NTR; 1.
PROSITE; PS50189; NTR; 1.
Developmental protein; Differentiation; G1
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SIGNAL 1 31

CHAIN 32 314

DOMAIN 53 169

DOMAIN 186 306

CARBOHYD 173 173

DISULFID 58 121

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DISULFID 105 140

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- SIMILARITY: Belongs to t (SERP) family.

- SIMILARITY: Contains 1 F - SIMILARITY: Contains 1 N
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MGI:892014; Sfrp1.
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BC024495; AAH24495.1; -; mRN
AK081052; BAC38123.1; -; mRN
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long as its content is in no way
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RESULT 14
SFRP1 CHIC
ID SFRP1
AC Q9DEC
DT 10-M2
DT 10-M2
DT 10-M2
DT Secre
GN Name=
OS Gallu
OC Archo
OC Gallu
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Best Local Similarity
Matches 164; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE.

PubMed=15210177; DOI=10.1016/j.mod.2004.03.003;
Esteve P., Lopez-Rios J., Bovolenta P.;
"SFRP1 is required for the proper establishment of the medaka fish.";
Mech. Dev. 121:687-701(2004).

EMBL; AY560904; AAAS59408.1; -; mRNA.
GO; GO:0016020; C:membrane; IEA.
GO; GO:001488; F:transmembrane receptor activity;
GO; GO:0016055; P:Wnt receptor signaling pathway;
InterPro; IPR000134; Netrin_C.
                                                                                                                   RP1_CHICK
STANDARD;
PRT; 3
SFRP1_CHICK STANDARD;
Q9DEQ4;
10-MAY-2005 (Rel. 47, Created)
10-MAY-2005 (Rel. 47, Last sequence up
10-MAY-2005 (Rel. 47, Last annotation
Secreted frizzled-related protein 1 pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last nnotation update)
Secreted frizzled-related protein 1.
Oryzias latipes (Medaka fish) (Japanese ricefish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;
Beloniformes; Adrianichthyidae; Oryziinae; Oryzias.
                                                                         Name=SFRP1;
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF01392; Fz; 1.
Pfam; PF01759; NTR; 1.
SMART; SM00643; C345C; 1.
SMART; SM00063; FRI; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS50038; FZ; 1.
PROSITE; PS50189; NTR; 1
                                               Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=8090;
                       Archosauria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AVRAGCAPLMEAYGFPWDEMLHCHKFPLDNDLCIAV------QFGHLPATAPPVTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RTAALALLIGALHWAPARCEEYDYYGWQAEPLH-GRSYSKPPQCLDIPADLPLCHTVGYK 69
                                                                                                                                                                                                                                                                                                                                                                                  NYKCPAFENVF
                                                                                                                                                                                                                                                                                                                                                                                                                                  SYPCSLYYPFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LKKLTLYLKNGANCPCQQLENLENQYLIMGRKVDKQFLLTGIHKWDKSSKEFKKIMKKLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFÄVKFMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVRDSCSPIMEAFGFPWPEMLTCDKFPQDG-VCIAVTQPNATEATWPSGHSPA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RWTQLVLLLAVTCGA----SEYE-YTWAAGSYNGGRGYGKAPQCVDIPDDLRLCHTVGYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -CPPCDNEIKNDAMLENICASEFALKAKIKEVKQENMDRKVI-LQRRKRMVKQGNLKKRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                       Neognathae;
                                                    Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34955 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49.2%;
                                                                                                                                                                                                                                                                                                                                                                                  305
                                                                                                                                                                                                                                                                                                                                                                                                                                    310
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 851; DB
Pred. No. 3.2e
47; Mismatches
                            Craniata; Vertebrata;
; Galliformes; Phasian:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6D49B0FB9682C48C CRC64;
                                                                                                                         ce update)
cion update)
1 precursor
                                                                                                                                                                                                                                                         314
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les 74;
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                                                       Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              eye
                                  Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26;
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primitive streak formation, expression localized to the anterior blastoderm including the anterior tip of primitive streak. At the beginning of Hensen's node regression, strongly expressed, anterior to the node, in the ectoderm, in the presumptive neuroectoderm as well as in prechordal and lateral mesoderm. Later expression in the blastoderm anterior to Hensens's node. During neurolation, high levels detected in the anterior neural plate. Expression also found in the neural folds including the premigratory cephalic neural crest cells, in the anterior ectoderm, in the lateral mesoderm, in the precordal plate and weaker expression in the notocord. From stage 10-14, strong expression in the notocord. From stage 10-14, strong expression in the anterior recural tube, including the optic vessels, where expression is limited to the precumptive neural retina and the overlying ectoderm. Later expression in the lens placode and the overlying ectoderm. Later expression in the lens placode and the couter layer of the optic cup. Expression also in the prechordal plate, the Rathke's pouch and later in the infundibular region. Expression in head messenchyme, including migrating cephalic neural crest cells. Restricted expression within the metencephalic neural vesicle and ventral neural tube. Also expressed in the notochord, the otic vesicles, dorsal mesocardium and the area vasulosa. From stages 18-26, expression found in the telencephalic vesicles, in the optic cup, the trigeminal ganglia, and in a band which occupies the basel plate of prosomere one. During neural tube differentiation, expression follows a rosto-caudal gradient. Expression appears in the floor plate and in cells that occupy the medial neural tube. Expression also localized to the mesonchyme of the developing branchial arches, the most distal and ventral portion of the developing limb buds, including the ectodermal apical ridge and to the mesoncerm of the developing
Pfam; PF01392; Fz; 1.
Pfam; PF01759; NTR; 1.
SMART; SM00643; C245C; 1.
SMART; SM00063; FRI; 1.
PROSITE; PS50038; FZ; 1.
PROSITE; PS50189; NTR; 1.
Developmental protein; Differentiation; Glycoprotein; Signal; Wnt signaling pathway.
SIGNAL 1 31 Potential.
                                                                                                                                                                                                                                                                                                                                                                                   This Swiss-Prot entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Esteve P., Morcillo J., Bovolenta P. "Early and dynamic expression of cSf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE [MRNA], AND DEVELOPMENTAL STAGE.
MEDLINE=20480381; PubMed=11025229; DOI=10.1016/S0925-4773(00)00421-4;
                                                                                                                                                                                                           InterPro; IPR000024; Fz_dom:
InterPro; IPR001134; Netrin
                                                                                                                                                                                                                                                    Ensembl; ENSGALG00000003473; Gallus gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Contains SIMILARITY: Contains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            kidney. DOMAIN: The FZ domain is involved in binding with Wnt ligands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          similarity).
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: Soluble frizzled-related modulators of Wnt signaling through They have a role in regulating cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   matrix-associated. Released by heparin-binding (By similarity). DEVELOPMENTAL STAGE: Expression first detected at the pre-streak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                specific cell types.
SUBCELLULAR LOCATION: Secreted. Cell membrane or extracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (sFRP) family.
                                                                                                                                                                                                                                                                                               AJ404652;
                                                                                                                                                                                                                                                                                                                                                              long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   uniformly distributed throughout the blastula.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97:217-221 (2000)
                                                                                                                                                                                                                                                                                                                                                                as its content
                                                                                                                                                                                                                                                                                               CAC15041.1; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Belongs to
                                                                                                                                                                                                                                  Fz_domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (frizzled) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain.
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h direct interaction with Wnts.
l growth and differentiation in
                                                                                                                                                                                                                                                                                                                                                                modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                     ne EMBL outstation restrictions on it
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                                                                                                                                                                                                                                                                                                                                                                                                           a collaboration
MBL outstation -
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RESULT 15
Q9Y124 XENLA
Q9Y124 XENLA PRELIMINARY;
DAC DAR RAP DA
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Best Local S
Matches 166
                                                                        Xu Q., D'Amore P., Sokol S.;
Submitted (FEB-1998) to the EMBL/GenBank/DE
EMBL; AF049908; AAD02492.1; -; mRNA.
HSSP; O61091; 11IY.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0004888; F:transmembrane receptor ac
GO; GO:0007275; P:development; IEA.
GO; GO:0007275; P:whot receptor signaling pa
InterPro; IPR001024; Fz_domain.
InterPro; IPR001134; Netrin_C.
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DOMAIN
DOMAIN
DOMAIN
CARBOHYD
DISULFID
                                      InterPro; IPR001134; Pfam; PF01392; Fz; 1. Pfam; PF01759; NTR; 1
                                                                                                                                                                                                                                                                                                                                                    בייגים אפרמביסמ; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-1999
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9YI24;
01-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Frizzled-related protein.
                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=frzA;
                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VKFM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IRKKNLKKLVLLLKNGADCPCHQLDNLGHHFLIMGRQVKTQHLLTAIYKWDKKNKEFK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPVTKI CAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I PADLIRLCHSVGYDKNVLPNLLDHETMAEVKHQASSWVPLLNKNCHMGTQVFLCSLFAPV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PKGTTVCPPCDNEMKSEAIVEHLCASEFALKMTIKEVKKENGDKVII--PRKRKALKLGP
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C345C; 1.
FRI; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                          EMBL/GenBank/DDBJ
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Pred. No. 5.
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y similarity.
A7AE6F9F6F5D333C
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PROSITE; PS50189; NTR; 1.
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; ORGANISM: Bos taurus
US-11-184-005-2
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                                                                                                                                                                                                                         PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR FILING DATE: 2001-01-11
                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/11/054,281
CURRENT FILING DATE: 2005-02-08
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SOFTWARE: FastSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/261,014
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CURRENT APPLICATION NUMBER: US/11/184,005
CURRENT FILING DATE: 2005-07-18
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                                                                                                                                                                                                                                                                                                                                                ITLE OF INVENTION: Proteins and Nucleic Acids Encoding ILE REFERENCE: 21402-240CIP
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                     FILING DATE: 2001-08-17
                                        APPLICATION NUMBER:
                                                         APPLICATION NUMBER: 60/261,029 FILING DATE: 2001-01-11
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                                                                                                                       APPLICATION NUMBER: 60/261,026
APPLICATION NUMBER: 10/044,564
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26.1%;
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Pred. No. 1.9e-20;
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US-11-054-281-120
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SEQ ID NO 36
LENGTH: 591
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CURRENT FILING DATE: 2005-02-08
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                             123 PCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKPPLDND---LCIAVQFGHLPATAPP 176
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                                                                                            VGYKRWRLPNILEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDR---PJY 122
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                                                               IGYNLTRMPNLLGHTSQGEAAAELABFAPLVQYGCHSHLRFFLCSLYAPMCTDQVSTPIP 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACREMCEQARLRCAPIMEQFNFGWPDSLDCARLPTRNDPHALCMEAPEN---ATAGP 163
ACRPMCEQARLRCAPIMEQFNFGWPDSLDCARLPTRNDPHALCMEAPEN---ATAGP 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IGYNLTRMPNILGHTSQGEAAAELAEFAPLVQYGCHSHLRFFLCSLYAPMCTDQVSTPIP 109
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o. US20060013813A1
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Pred. No. 4.9e-20;
3; Mismatches 53;
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US-11-051-720-1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Compugen Ltd
TITLE OF INVENTION: NOVEL NUCLECTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
TITLE OF INVENTION: THEREOF FOR DIAGNOSIS OF LUNG CANCER
FILE REFERENCE: 1847.1002
CURRENT APPLICATION NUMBER: US/11/051,720
CURRENT FILING DATE: 2005-01-27
NUMBER OF SEQ ID NOS: 1780
SEQ ID NO 1306
LENGTH: 180
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Query Match
Best Local Similarity
Matches 57; Conserv
                                                                                                                                                                                                                        SOFTWARE: PatentIn
SEQ ID NO 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/11/054,281
CURRENT FILLING DATE: 2005-02-08
PRIOR APPLICATION NUMBER: 60/261,014
PRIOR FILING DATE: 2001-01-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Mezes et al.
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-240CIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION, NUMBER: 60/261,018
PRIOR APPLICATION, NUMBER: 60/318,410
PRIOR FILING DATE: 2001-09-10
PRIOR FILING DATE: 2001-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,026
                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 324
                                                                                                                                                                                                                                                                                        PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2001-08-17 PRIOR APPLICATION NUMBER: 10/044,564
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
                                                                                                                                           TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                       LENGTH: 117
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                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2001-01-11
                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/313,170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/261,013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH--LPAT 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PNLLEHESLAEVKQQASSWLELLAKRCHSDTQVFLCSLFAPVC---LDRPIYPCRSLCEA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VKDRCAPVMSAFGFFWFDMLECDRFFQDNDLCIPLASSDHLLPAT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNLLGHETMKEVLEQAGAWIPLVMKQCHPDTKKFLCSLFAPVCLDDLDETiQPCHSLCVQ 120
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  Conservative
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                   18.3%; Score 316.5; DB 51.8%; Pred. No. 9e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21;
    14; Mismatches
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                                                                                                                       Artificial Sequence:consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 7;
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    36;
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    Indels
                                      Length
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    Gaps
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APPLICANT: APPLICANT: APPLICANT:

Hoang, Bang Wang, Shouwen

OF INVENTION: METHOD OF MODULATING TISSUE OF INVENTION: GROWTH USING FRZB PROTEIN

APPLICANT: Luyten, Frank P. APPLICANT: Moos, Malcolm JR.

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RESULT 8
US-11-184-005-2
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Sequence 2, Application US/11184005; Publication No. US20050256052A1; GENERAL INFORMATION:
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Publication No.
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PRIOR FILING DATE: 2001-12-19
PRIOR APPLICATION NUMBER: US 08/822333
PRIOR FILING DATE: 1997-03-20
PRIOR APPLICATION NUMBER: US 08/729,452
PRIOR FILING DATE: 1996-10-11
NUMBER: OF SEQ ID NOS: 23
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APPLICANT: Wang, Shouwen
TITLE OF INVENTION: METHOD OF MODULATING TISSUE
TITLE OF INVENTION: GROWTH USING FRZB PROTEIN
FILE REFERENCE: NIH133.1CPC3
CURRENT APPLICATION UNDERS: US/11/184,005
CURRENT FILING DATE: 2005-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Luyten, Frank P. APPLICANT: Moos, Malcolm JR.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 319
TYPE: PRT
ORGANISM: Xenopus laevis
                                                                                                                                                                                     271
                                                                                                                                                                                                                                208
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64 TEULPEPILPCRSLCEAAREGCEPLMEKFGFGWPEFLRCDRFPVQNELCM 113
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No. US20050256052A1
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                                                                                                                                                 EDKERTRLLLVEGSLAEKWRDRLAKKVKRWDQK 293
                                                                                                                                                                                       K-----VDGQL-----LLMAVYRWDKK 287
                                                                                                                                                                                                                                KVKCHDATAI--VEVKEILKSSLVNIPKDTVTLY----TNSGCLCPQLVA-NEEYIIMGY 260
                                                                                                                                                                                                                                                                        KIENGDRKLIGAQKKKKLLKPGPLK-RKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGR
                                                                                                                                                                                                                                                                                                              EQGTDSMPDFPMDSNNGNCGSTA---GEHCKCKPMKASQKTYLKN--NYNYVIRAKVKEV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16.5%; Score 285; DB 7; Length 319; 27.8%; Pred. No. 4.5e-21; tive 50; Mismatches 93; Indels
                                                                                                                                                                                                                                                                                                                                                    GHLPATAPPVTKICAQCEMEHSADGLMEQMCSSDFVVKMRIKEI 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54;
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US-11-067-121-11

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APPLICANT: RONGAH, LENA
TITLE OF INVENTION: THERAPEUTIC PROTEINS
FILE REFERENCE: 1899-902001
CURRENT APPLICATION NUMBER: US/11/067,121
CURRENT FILING DATE: 2005-02-25
PRIOR APPLICATION NUMBER: US 60/576,445
PRIOR FILING DATE: 2004-06-02
PRIOR FILING DATE: 2004-06-02
PRIOR FILING DATE: 2004-06-02
PRIOR FILING DATE: 2004-02-27
NUMBER OF SEQ ID NOS: 20
SOFTWARE: FASTSEQ for Windows Version 4.0
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; ORGANISM: Mus musculus
US-11-067-121-2
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 295
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Publication No. US20050261185A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                               APPLICANT: Martijn
APPLICANT: Rondah
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TITLE OF INVENTION: THERAPEUTIC PROTEINS
FILE REFERENCE: 18909-002001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CUCRENT APPLICATION NUMBER: US/11/067,121
CURRENT FILING DATE: 2005-02-25
PRIOR APPLICATION NUMBER: US 60/576,445
PRIOR FILING DATE: 2004-06-02
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLIKANT: Martijn, Cecile
APPLICANT: Rondahl, Lena
                                       ENGTH: 295
                                                             ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 QVKDRCAPVMSAFGFPWPDMLECDRFPQDNDLCIPLASSDHLLPATEEAP----KVCEACK 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130 AVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH--LPAT--APPVTKICAQCE 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMK 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPNLLGHETMKEVLEQAGAWIPLVMKQCHPDTKKFLCSLFAPVCLDDLDETIQPCHSLCV 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ASLLLLVLASHCCLGSARGLFLFG-QPDFSYKRSNCKP----IPANLQLCHGIEYQNMR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AALALLLGALHWAPARCEEYDYYGWQABPLHGRSYSKPPQCLDIPADLPLCHTVGYKRMR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35.9%; Score 620.5; DB ilarity 44.1%; Pred. No. 6e-55; Conservative 51; Mismatches
                                                                                                                                                                                                                                                                                                                 , Cecile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER: SE 0400489-1
2004-02-27
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Sequence 1701, Application US/11051720

Publication No. US20060046257A1

GENERAL INFORMATION:

APPLICANT: Compugen Ltd

TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES,

TITLE OF INVENTION: THEREOF FOR DIAGNOSIS OF LUNG CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens US-11-051-720-1701
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CURRENT APPLICATION NUMBER: US/11/051,720
CURRENT FILING DATE: 2005-01-27
NUMBER OF SEQ ID NOS: 1780
SEQ ID NO 1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
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TYPE: PRT
238 WLKDSLQCTCEEMNDINAPYLVMGQKQGGELVITSVKRWQKGQREFK 284
                                            246 HMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMK 292
                                                                                                                             187 EHSADG-LMEOMCSSDFVVKMRIKEIKIENGDRKLIGAOKKKKLLKPGPLKRKDTKRLVL 245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246 HMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMK 292
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                                                                                                                                                                                                                                                                                                                                                                                          14 ALALLIGALHWAPARCEBYDYYGWQAEPLHGRSYSKPPQCLDIPADLPLCHTVGYKRMRL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 ALALLIGALHWAPARCEBYDYYGWQAEPLHGRSYSKPPQCLDIPADLPLCHTVGYKRMRL
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                                                                                      KNDDDNDIMETLCKNDFALKIKVKEITYINRDTKIILETKSKTIYKLNGVSERDLKKSVL
                                                                                                                                                                            VKDRCAPVMSAFGFPWPDMLECDRFPQDNDLCIPLASSDHLLPATEEAP---KVCEACKN 177
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Pred. No. 2.4e-54;
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RESULT 5 US-11-051-720-1306

Sequence

1306, Application US/11051720

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Maximum Match 100%
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Sequence:
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      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*

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7: /cgn2_6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*

8: /cgn2_6/ptodata/1/pubpaa/USO1_NEW_PUB.pep:*
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US-11-054-281-128
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
88	88	100.5	130	130	156	161	207	207	207	209.5	209.5	210.5	211	215	243.5	249	251	251.5	252.5
5.1	5.1	5.8	7.5	7.5	9.0	9.3	12.0	12.0	12.0	12.1	12.1	12.2	12.2	12.4	14.1	14.4	14.5	14.5	14.6
488	462	548	433	116	1042	1113	346	346	346	348	348	348	346	351	111	188	580	577	111
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
US-11-169-041-176	US-11-072-512-2086	US-11-137-465-47	US-11-152-366-44	US-11-152-366-283	US-11-067-811-1	US-11-067-811-4	US-11-054-281-96	US-11-054-281-24	US-11-186-284-189	US-11-054-281-98	US-11-054-281-69	US-11-054-281-99	US-11-054-281-97	US-11-054-281-100	US-11-184-005-5	US-11-152-366-249	US-11-054-281-95	US-11-054-281-130	US-11-184-005-6
Sequence 176, App	Sequence 2086, Ap	Sequence 47, Appl	Sequence 44, Appl	Sequence 283, App	Seguence 1, Appli	Sequence 4, Appli	Sequence 96, Appl	Sequence 24, Appl	Sequence 189, App	Sequence 98, Appl	Sequence 69, Appl	Sequence 99, Appl	97,	٦,	Sequence 5, Appli	Sequence 249, App	Sequence 95, Appl	Sequence 130, App	Sequence 6, Appli

ALIGNMENTS

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; ORGANISM: Homo sapiens US-10-821-234-989
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US-10-821-234-989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Labat, Ivan
APPLICANT: Stache-Crain, Birgit
APPLICANT: Andarmani, Susan
APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis an
FILE REFERENCE: 821A
CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR FILING DATE: 2003-04-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 1704
SOFTWARE: pt_SEQ_genes Version 1.0
SEQ ID NO 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 52.9%;
Best Local Similarity 56.3%;
Matches 179; Conservative 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 989, A Publication No.
                                                                                                                                                                                                                                                           114 PVCLDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPA
293 FAVKFMFSYPCSLYYPFF 310
                                                                                                                                                                                                                                                                                                                                                      GPIKKKDLKKLVLYLKNGADCPCHQLDNLSHHFLIMGRKVKSQYLLTAIHKWDKKNKEFK
                                                                                                                                                                      TAPPVTKICAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKP
                                                                                        GPLKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMK 292
                                                                                                                                      SKPQGTTVCPPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKL
                                                                                                                                                                                                                                   PVCLDRPIYPCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCIAMTPPNATEA
                                                                                                                                                                                                                                                                                                                                VDIPADLRLCHNVGYKKMVLPNLLEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFA
                                                                                                                                                                                                                                                                                                                                                                                                                          RAGMGIGRSEGGRRGALGVLLALGAALLAVGSASEYDYVSFQSDIGPYQSGRFYTKPPQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RAAAAAG---GVRTAALALL--LGALHWAPARCEEYDYYGWQAE--PLH-GRSYSKPPQC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 916; DB 6; DC. 1.4e-84; Pred. No. 1.4e-84; Indels 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and Treatment of Preeclampsia
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PRIOR APPLICATION NUMBER: 60/261,014
PRIOR FILING DATE: 2001-01-11
PRIOR PEPLICATION NUMBER: 60/261,018
PRIOR FILING DATE: 2001-01-11
PRIOR PAPPLICATION NUMBER: 60/318,410
PRIOR PILING DATE: 2001-09-10
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR FILING DATE: 2001-01-11
                                                                                                                                                                                                                                                                                                  Sequence 92, Application US/11054281
Publication No. US20060013813A1
GENERAL INFORMATION:
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LENGTH: 592
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                                                                                                                                                                                    APPLICANT: Mezes et al.
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-240CIP
CURRENT APPLICATION NUMBER: US/11/054,281
CURRENT FILING DATE: 2005-02-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Mezes et al. TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same FILE REFERENCE: 21402-240CIP
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CURRENT FILING DATE: 2005-02-08
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SOFTWARE: PatentIn Ver. 2
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FILING DATE: 2001-01-11
APPLICATION NUMBER: 60/313,170
FILING DATE: 2001-08-17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   157 LDND---LCIAVQFGHLPATAPP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 CHSDTQVFLCSLFAPVCLDR----PIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFP 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHSHLRFFLCSLYAPMCTDQVSTPIPACRPMCEQARLRCAPIMEQFNFGWPDSLDCARLP
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65 TVGYKRMRLPNILLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCL----DRP 120

SLPWNMTKMPNHLHHSTQANAILAIEQFEGLLGTHCSPDLLFFLCAMYAPICTIDFQHEP 102

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US-11-184-005-8
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; TYPE: PRT
; ORGANISM: Gallus gallus
US-11-054-281-92
                                                                                                                                                  US-11-184-005-8
                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 8, Application US/11184005
Publication No. US20050256052A1
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                                                                         Matches
                                                                                                            Query Match
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PRIOR FILING DATE: 2002-01-11
NUMBER OF SEQ ID NOS: 324
SOFTWARE: PatentIn Ver. 2.1
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PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/313,170
PRIOR FILING DATE: 2001-09-17
                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 08/822333
PRIOR FILING DATE: 1997-03-20
PRIOR APPLICATION NUMBER: US 08/729,452
PRIOR FILING DATE: 1996-10-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Wang, Shouwen
TITLE OF INVENTION: METHOD OF MODULATING TISSUE
TITLE OF INVENTION: GROWTH USING FRZB PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Luyten, Frank P. APPLICANT: Moos, Malcolm JR.
                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: NIH133.1CPC3
CURRENT APPLICATION NUMBER: US/11/184,005
CURRENT FILING DATE: 2005-07-18
                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 23
                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 10/028051 PRIOR FILING DATE: 2001-12-19
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                                                                                                                                                                   OTHER INFORMATION: Consensus sequence
                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 106 PIPACRVMCEQARLKCSPIMEQFNFKWPDSLDCSKLPNKNDPNYLCM 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120 PIYPCRSICEAVRAGCAPIMEAYGFPWPEMIHCHKFPLDND---ICI 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63 CHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAFVCLDR--- 119
12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hoang, Bang
Wang, Shouwen
                                 AGGVRTAALALLL--GALHWAPARCEEYDYYGWQAEPLHGRSYSKPPQCLDIPADLPLCH 64
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25.8%;
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                                                                       Score 276.5; DB 7;
Pred. No. 3.3e-20;
2; Mismatches 106;
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                                                                                                            Length 319;
                                                                           Indels
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 --PVRIPLCK 42
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PRIOR APPLICATION NUMBER: US 10/028051
PRIOR FILING DATE: 2001-12-19
PRIOR PRIOR PLICATION NUMBER: US 08/822333
PRIOR FILING DATE: 1997-03-20
PRIOR APPLICATION NUMBER: US 08/729,452
PRIOR FILING DATE: 1996-10-11
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 4
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US-11-184-005-4
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Publication No. US20050256052A1
GENERAL INFORMATION:
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Best Local Similarity
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CURRENT APPLICATION NUMBER: US/11/184,005
CURRENT FILING DATE: 2005-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: METHOD OF MODULATING TISSUE TITLE OF INVENTION: GROWTH USING FRZB PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Luyten, Frank P. APPLICANT: Moos, Malcolm JR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 325
TYPE: PRT
ORGANISM: Homo sapiens
                                                                       215
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EGSIAEKWKDRLGKKVKRWDMKLRHL 296
                                    DGQL-----LLMAVYRWDKKNKEM 291
                                                                     AVVEVKEILKSSLV---NIPRDTVNLYTSSGCLCPPL-NVNEEYIIMGYEDEERSRLLLV
                                                                                                          GAQKKKKLLKPGPLKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRK-----V
                                                                                                                                              DGADFPMDSSNGNCRGASSERCKCKPIRATQKTYFRNNYNYVIRAKVKEIKTKCHD--VT 214
                                                                                                                                                                                 ICAQCEMEHS---ADGLMEQMC------SSDFVVKMRIKEIKIENGDRKLI 221
                                                                                                                                                                                                                        IKPCKSVCERARQGCEPILIKYRHSWPENLACEELPVYDRGVCISPE-----AIVTA 156
                                                                                                                                                                                                                                                            IYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPL-DNDLCIAVQFGHLPATAPPVTK 179
                                                                                                                                                                                                                                                                                                 SLPWNMTKMPNHLHHSTQANAILAIEQFEGLLGTHCSPDLLFFLCAMYAPICTIDFQHEP
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Wang, Shouwen
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25.8%; Pred. No. 4.7e-20;
ative 52; Mismatches 106;
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; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 63
; LENGTH: 585
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-127-877-63
Job time : 24 secs
                   Search completed: March 22, 2006, 22:47:15
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US-11-127-877-63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Laenen, Wendy
TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
TITLE OF INVENTION: Amyloid-Beta Protein Production
FILE REFERENCE: P27,800-B USA
CURRENT APPLICATION NUMBER: US/11/127,877
CURRENT FILING DATE: 2005-05-12
PRIOR APPLICATION NUMBER: 60/570,352
PRIOR APPLICATION NUMBER: 60/570,352
PRIOR FILING DATE: 2004-05-12
PRIOR FILING DATE: 2004-05-12
PRIOR PPLICATION NUMBER: 60/603,948
PRIOR FILING DATE: 2004-08-24
NUMBER OF SEQ ID NOS: 590
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                       146
                                                                                                                                                                                                                             108 LCSLFAPVCL---DRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFP-LDND--- 160
                                                                                                                                   161 LCIAVQFGHLPATAPP 176
                                                                                                                                                                                                                                                                                                                       48 SKPPQCLDIPADLPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVF 107
                                                                                                                                                                                 LCSMYTPICLPDYHKPLPPCRSVCERAKAGCSPLMRQYGFAWPERMSCDRLPVLGRDAEV 145
                                                                                                                                                                                                                                                                         SKAPVCQEI--TVPMCRGIGYNLTHMENQFNHDTQDEAGLEVHQFWPLVEIQCSPDLRFF
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Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh
-Q=|abse/BASSWEB gpool/UG10768566/runat_22032006_155807_25230/app_query.fasta_1
-Q=|abse/BASSWEB gpool/UG10768566/runat_22032006_155807_25230/app_query.fasta_1
-DB=GenEmbl -QFMT=fastap -SUFFIX=p2n.rg= -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human10.cdi -LIST=45
-DCCALIGU=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000 -HOST=abss08
-USER=US10768566 @CCN 1 14939 @runat_22032006 155807 25230 -NCPU=6 -ICPU=3
-NO_MMAP -NEG_SCORES=0 "MAIT -DSPBLOCK=100 -LONGLOG -DEV_TIMEOUT=120
-NARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7
-YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
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ALIGNMENTS

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				REFERENCE AUTHORS		SOURCE ORGANISM	VERSION KEYWORDS	ACCESSION	LOCUS	RESULT 1 BC050435
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,	Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Millahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunarathe, P.H., Richards, S.,	HOPKING, R.F., JOYdan, H., MOOTE, T., Max, S.I., Wang, U., HSIEN, F., Diatchenko, I., Marusina, K., Farmer, A.A., Rubin, G.N., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheat, T.F. Brownstain M.T. Hedin T.B. Toghiyuki S.	Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D., Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,	<pre>1 (bases 1 to 1852) Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,</pre>	Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteloostomi; Mammalla; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.	Homo sapiens (human) Homo sapiens	BC050435.1 GI:29791957 MGC.	MGC:54179 IMAGE:6189478), complete cds. BC050435	BC050435 Homo mapienm mecreted frizzled-related protein 5, mRNA (CDNA clone	

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  US-10-768-566-1
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Tissue Procurement: Dr. James R. Lupski
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human (
Center, Stanford University School of Medicine, Stanford, center, http://www-abgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clone distribution: MGC clone distribution through the I.M.A.G.E. Consortium/LLNL at: Series: IRAK Plate: 98 Row: 1 Column: 6.
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/protein_id="AAH50435.2"
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/db_xref="SeneID:6425"
/db_xref="MIM:604158"
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/tissue_type="Peripheral Nervous System,
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/db_xref="taxon:9606"
/clone="MGC:54179 IMA
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/db_xref="GeneID:6425"
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Umansky,S. and Melkonyan,H.
Gene family encoding apoptosis-associated peptides, peptides
encoded thereby and method of using the same
Patent: JP 2002516564-A 3 04-JUN-2002;
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            AlaTyrGlyPheProTrpProGluMetLeuHisCysHisLysPheProLeuAspAsnAsp
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GCCTACGGCTTCCCCTGGCCTGAGATGCTGCACTGCCACAAGTTCCCCCTGGACAACGAC
                                                               IleTyrProCysArgSerLeuCysGluAlaValArgAlaGlyCysAlaProLeuMetGlu
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24-SEP-1997 JP 1998515877
24-SEP-1996 US 60/026603,11-OCT-1996 US 60/028363 PI
IL UMANSKY,HOVSEP MELKONYAN
CL2N15/12,C12N15/62,C07K14/47,C07K16/18,C12Q1/68,G01N33/53,
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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Method for modulating stem cell differentiation
Patent: WO 03012082-A 38 13-FEB-2003;
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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/mol_type="unassigned DNJ
/db_xref="taxon:9606"
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Melkonyan, H., Procha
Direct Submission
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         /gene="SARP3"
/note="similar t
protein"
                                          /gene="SARP3"
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Melkonyan, H., Chang, W.C., Shapiro, J.P., Mahadevappa, M.,
Melkonyan, H., Chang, W.C., Tomei, L.D. and Umansky, S.R.
Fitzpatrick, P.A., Kiefer, M.C., Tomei, L.D. and Umansky, S.R.
SARPs: a family of secreted apoptosis-related proteins
SARPs: a family of secreted apoptosis-related proteins
Proc. Natl. Acad. Sci. U.S.A. 94 (25), 13636-13641 (1997)
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Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
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Homo sapiens secreted apoptosis
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/mol_type="mRNA"
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codon_start=1
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                                                                                                                                                   AspPheValValLysMetArgIleLysGluIleLysIleGluAsnGlyAspArgLysLeu
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                                                               ATTGGAGCCCAGAAAAAGAAGCTGCTCAAGCCGGGCCCCCTGAAGCGCAAGGACACC
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LLMAVYRWDKKNKEMKFAVKFMFSYPCSLYYPFFYGAAEPH"
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Chang, J.T., Esumi, N., Moore, K., Li, Y., Zhang, S., Chew, C., Goodman, B., Rattner, A., Moody, S., Stetten, G., Campochiaro, P. Zack, D.J.
Cloning and characterization of a secreted frizzlad-related
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Patent: WO 02068579-A 6519 06-SEP-2002;
PE Corporation (NY) (US)
Location/Qualifiers
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                                                                                                                                                                                                                                    SerLeuAlaGluValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCys
                                                                                                                                                                                                                                                                                         AlaLeuHisTrpAlaProAlaArgCysGluGluTyrAspTyrTyrGlyTrpGlnAlaGlu
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LysArgLeuValLeuHisMetLysAsnGlyAlaGlyCysProCysProGlnLeuAspSer
                                         IleGlyAlaGlnLysLysLysLysLeuLeuLysProGlyProLeuLysArgLysAspThr
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                                                                                           AspPheValValLysMetArgIleLysGluIleLysIleGluAsnGlyAspArgLysLeu
                                                                                                                                 TGCGCCCAGTGTGAGATGGAGCACAGTGCTGACGGCCTCATGGAGCAGATGTGCTCCAGT
                                                                                                                                               CysAlaGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSer
                                                                                                                                                                                    CTCTGCATCGCCGTGCAGTTCGGGCACCTGCCGCCACCGCGCCTCCAGTGACCAAGATC
                                                                                                                                                                                               LeuCysIleAlaValGlnPheGlyHisLeuProAlaThrAlaProProValThrLysIle
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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05-10-768- Qy Db Qy	. ዓობულ	FEATURES SOURCE ORIGIN		COMMENT	NIS ORS	RESULT 9 E44023 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE	B & B & B & B
-566-1 (1-317) x E44023 (1-1280) 1 MetArgAlaAlaAlaAlaGlyGlyValArgThrAlaAlaLeuAlaLeuLeuLeuGly 20	2.24e-138 1692.00 milarity: 99.4% .Similarity: 99.4% .h: 6		PC A6184700,A61P3/04,A61P3/10,A61P9/10,A61P9/12,A61P13/12, PC C07K14/47, PC C07K16/18,C12N1/15,C12N1/19,C12N1/21,C12N5/10,C12P21/02, PC C12Q1/02,C12Q1/68, PC G01N33/53,G01N33/531,G01N33/566,G01N33/577//C12P21/08, PC C12N15/00,A61K37/02, PC C12N5/00 CC Strandedness: Single; CC Topology: Linear; CC Topology: Linear;	, PC	<pre>v unidentified unclassified. 1 (bases 1 to 1280) 1 (bases 1 to 1280) Fu,A. and Zu,Y. Novel human gene analogous to secretory mouse protein sFRP-1 Patent: JP 2000106889-A 1 18-APR-2000; SMITHKINE BESCHAM CORP</pre>	J & & O & O	728 AAGCGGCTGGTGCTGCACATGAAGAATGGCGCGGGCTGCCCCACAGCTGAACAGC 787 261 LeuAlaGlySerPheLeuValMetGlyArgLy8ValAspGlyGlnLeuLeuLeuMetAla 280
KEYWORDS SOURCE ORGANISM ORGANISM REFERENCE AUTHORS	RESULT 10 AF117757 LOCUS DEFINITION ACCESSION VERSION	B & B & B	0 B 0 B 0	Q D Q	D	0	D Q D Q D D D D D D D D D D D D D D D D
DS Bos taurus (cow) Bos taurus Bos taurus Bos taurus Bos taurus Bukaryota; Metazoa; Chordara; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metheria; Laurasiatheria; Cetartiodactyla; Ruminantia; Mammalia; Eutheria; Bos. Pecora; Bovidae; Bovinae; Bos. 1 (bases 1 to 1728) DRS Chang, J.T., Esumi, N., Moore, K., Li, Y., Zhang, S., Chew, C.,	10 57 AF117757 1728 bp mRNA linear MAM 14-APR-1999 FION Bos taurus secreted frizzled-related protein 5 (sfrp5) mRNA, complete cds. ION AF117757 AF117757 GI:4583383	878 CTGGCGGGAGCTTCCTGGTCATGGGCCGCAAAGTGGACAGCTGCTGCTCCTATGGCC 937 281 ValTyrArgTrpAspLysLysAsnLysGluMetLysPheAlaValLysPheMetPheSer 300	221 11eGLyAlaGInLysLySLySLySLeLLeuLySPrOGLyProLeuLysArgLyBASpInr 240 21	CysAlaGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSer		101 HisSerAspThrGlnValPheLeuCysSerLeuPheAlaProValCysLeuAspArgPro 120	159 GCGCTGCACTGGGCGCCGGCGCGCGCGCGAGGAGTACCACTACTATGGCTGGC

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Cloning and characterization of a secreted frizzled-related that is expressed by the retinal pigment epithelium

7---- /10001 In press
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2 (bases 1 to 1728)
Chang, J.T., Esumi, N., Campochiaro, P.A. and Zack, D.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (05-JAN-1999) Ophthalmology, Wolfe St., Baltimore, MD 21287-9289, U
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                                                              CGCT
                                                                          ArgSerLeuCysGluAlaValArgAlaGlyCysAlaProLeuMetGluAlaTyrGlyPhe
                                                                                                                                              GlnValPheLeuCysSerLeuPheAlaProValCysLeuAspArgProIleTyrProCys
                                                                                                                                                                                          GTGAAGCAGCAGCGAGCAGCTGCCTGCCGCTGCCAAGCGCTGCCACTCGGACACG
                                                                                                                                                                                                               ValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCysHisSerAspThr
                                                                                                                                                                                                                                                           ACGGTGGGCTACAAGCGCATGCGGCTGCCCAACCTGCTGGAGCACGAGAGCCTGGCCGAG
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                                                                                                                                                                                                                                                                                                                                            ArgSerTyrSerLysProProGlnCysLeuAspIleProAlaAspLeuProLeuCysHis
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                                                                                                                             CAGGTCTTCCTCTCGCTCGTTCGCGCCCCGTCTGCCTCGACCGGCCCATCTACCCTTGC
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GAQDEGHLPATAPVTXICAQCEMEHADGLMEQMCSSDFVVKMRIKEIKIENGDRKL
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MAVYRWDKKNKEMKFAVKFMFSYPCSLYYPFFYGAAEPH"
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Klausner, R.D., Collins, F.S., Wagner, L., Schemen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Boutfard, G.G., Blakeeley, R.W., Touchman, J.W., Green, B.D.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.B.,
Schneroth, A., Schein, J.E., Jones, S.J. and Marra, M.A.

TM Mammalian Gene Collection Program Team
Generation and initial analysis of more than 15,000 full-length
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                                                                                                                    human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A.
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NIH MGC Project Direct Submission

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info@bcgsc.bc.ca
Martin Hirst, Thomas Zeng, Ryan Morin, Michelle Moksa, Johnson
Pang, Diana Mah, Jing Wang, Kieth Fichter, Eric Chuah, Allen
Pang, Diana Mah, Jing Wang, Kieth Fichter, Barber, Mabel
Pelaney, Rob Kirkpatrick, Agnes Baross, Sarah Barber, Mabel
Brown-John, Steve S. Chand, William Chow, Ryan Babakaiff, Dave
Wong, Corey Matsuo, Jaclyn Beland, Susan Gibson, Luis delRio, Ruth
Peatherstone, Malachi Griffith, Obi Griffith, Ran Guin, Nancy Liao,
Kim MacDonald, Mike R. Mayo, Josh Moran, Diana Palmquist, JR
Santos, Duane Smailus, Jeff Stott, Miranda Tsai, George Yang,
Santos, Duane Smailus, Jeff Stott, Miranda Tsai, George Yang,
Jacquie Schein, Asim Siddiqui, Steven Jones, Rob Holt, Marco Marra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Marcello Bento Soares, Ph.D.
CDNA Library Preparation: M. Bento Soares, University
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LI
DNA Sequencing by: Genome Sequence Centre,
BC Canner Agency, Vancouver, BC, Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at http://image.llnl.gov Series: IRAK Plate: 67 Row: e Column: 22
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 31560420.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (10-JUN-2002) National Institutes of Health, Gene Collection (MGC), Bethesda, MD 20892-2590, USA NIH-MGC Project URL: http://mgc.nci.nih.gov Contact: MGC help desk
                                            GCCTGGAGCGCACGGACGGCCGCACTGGCGTTGCTTGCTCGGGGCGCCTGCATGGGGCGCCCA
  AlaArgCysGluGluTyrAspTyrTyrGlyTrpGlnAlaGluProLeuHisGlyArgSer
                                                                    AlaGlyGlyValArgThrAlaAlaLeuAlaLeuLeuLeuGlyAlaLeuHisTrpAlaPro
                                                                                                                                                                                                                                                                                                                                                                                      /product="secreted frizzled-related sequence protein 5"
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AVQFGHLPATAPPVTKICAQCEMEHSADGIMEQMCSSDFVVKMRIKEIKIDNGDRKLI
AVGFGHLPATAPPVTKICAQCEMEHSADGIMEQMCSSDFVVKMRIKEIKIDNGDRKLI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="Sfrp5"
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[21. .1065
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/db_xref="GeneID:54612"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clōne="MGC:41101 IMAGE:1395864"
/tlssue type="Mammary gland"
/clone_lib="Soares_mammary_gland_NbMMG"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /strain="C57BL/6J"
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Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
1 (bases 1 to 1186)
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AF117759
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Mus musculus
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Best Local Similarity:
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Cloning and characterization of a secreted frizzled-related protein that is expressed by the retinal pigment epithelium Hum. Mol. Genet. (1999) In press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (05-JAN-1999) Ophthalmology, Wolfe St., Baltimore, MD 21287-9289, US
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Goodman, B.,
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                    AlaArgCysGluGluTyrAspTyrTyrGlyTrpGlnAlaGluProLeuHisGlyArgSer
                                                                                                                                                  PheLeuCysSerLeuPheAlaProValCysLeuAspArgProIleTyrProCysArgSer
                                                                                                                                                                                                                  GlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCysHisSerAspThrGlnVal
                                                                                                                                                                                                                                                                GGCTACAAGCGCATGCCGCCTGCCCAACCTGCTGGAGCACGAGAGCCTTGGCCGAGGTGAAG
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                 ProGluMetLeuHisCysHisLysPheProLeuAspAsnAspLeuCysIleAlaValGln
                                                                                    LeuCysGluAlaValArgAlaGlyCysAlaProLeuMetGluAlaTyrGlyPheProTrp
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GAQKKKKLLKAGPLKRKDTKKLVLHMKNGASCPCPQLDNLTGSFLVMGRKVEGQLLLT
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skppqctdipadlplchtvgykrmrlpntleheslaevkqqasswlpllakrchsdtq
vflcslfapvcldrpiypcrslceaaragcaplmeaygfpwpemlhchkfpldndlci
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/codon_start=1
/product="secreted frizzled-related protein
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/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="AAD25053.1"
/db_xref="GI:4583388"
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Rattner,A., Moody,S., Stetten,G., Campochiaro,P.A.
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Muzny, D. Marie., Metzker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Anguiano, D., Anguiano, D., Anguiano, D., Anguiano, D., Anguiano, D., Barlet, V., Aoyagi, A., Ayodeji, M., Baca, E., Baden, H., Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Brawlo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chu, J., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J., Clavez, D., Chen, G., Coyle, M., Cree, A., D'Souza, L., Claveland, C., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Davis, C., Davis, C., Ding, Y., Dinh, H., Divya, K., Dyaglado, O., Denson, S., Deramo, C., Ding, Y., Dinh, H., Divya, K., Dayaler, H., Escotto, M., Eugene, C., Evans, C.A., Falls, T., Fan, G., Evans, C.A., Falls, T., Fan, G., Evans, C.A., Falls, T., Fan, G., Farler, M., Gebregoorgis, E., Geer, K., Gill, R., Garcia, A., Garner, T., Garza, M., Gebregoorgis, E., Geer, K., Gill, R., Grady, M., Guerra, W., Guevara, W., Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Hernandez, R., Hogues, M., Hollins, B., Howells, S., Hulsdun, S.L., Hodgson, A., Hogues, M., Harvey, S., Kelly, S., Kelly, S., Khan, Z., King, L., Kovar, C., Karpathy, S., Kelly, S., Kelly, S., Khan, Z., King, L., Lu, Z., Liu, J., Liu, W., Liu, Y., London, P., Longacre, S., Lopez, J., Louseged, H., Lozado, R.J., Lu, X., Ma, J., Maheshwari, M., Mahindartne, M., Mahmoud, M., Malloy, K., Mangum, A.,
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Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Research Institute)
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Direct Suhmission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (30-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On May 30, 2003 this sequence version replaced gi:30580782. Sequencing is completed to a minimum standard of double strand coverage with a minimum of 2 clones and 2 reads with no ambiguities or 2 chemistries with a minimum of 2 clones and 3 reads with no ambiguities. If the sequence quality does not meet this standard, it will be indicated in the annotation.
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Direct Submission
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96170 GCTCCTCCTCGCACCACCCCAACCCCTCTCAAAGCTAATCTTAACTGCTGGGTCTTAGGA 96111	103 AspThrGlnValPheLeuCysSerLeuPheAlaProValCysLeuAspArgProIleTyr
176 176	9/310 GCGGAGGTGAAGCAGCAGGCAGGCTGCCGCTGCTGGCCAAGCGTTGCCACTCG
96230 CAGCTGGAACATTCAAATCTCCACTCCCTGCCCCCCCCCC	83 AlaGluValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCysHisSer 102
176 176	97370 TGCCACACAGTGGGCTACAAGCGCATGCGGCTGCCGAACCTCCTGGAGCACGAAAGCCTG
96290 GCTCCCAGCAGGCAGTCTTTGCCTGTTAACTCGGACAGCAAGAACTCCCCATGAGCCCCCA 96231	63 CysHisThrVaiGlyTyrLysArgMetArgLeuProAsnLeuLeuGluHisGluSerLeu
176 176	9/430 CACGGCCGCTCCTACCTCCAAGCCACCGCAGTGCCTCGACCATCTGCCCCTC
96350 CTCTTCCAAACTGGCCTGGGCCCCTAACACCTCCCCACCCCCAACCCACACACA	43 HISTARIGAETIYEETIYSETTIGETTIGETTIGETTIGETTIGETTIGETTIGETTI
176 176	71 THE COLUMN TO THE COLUMN TWO PROPERTY OF THE
96410 CTCAAAGCTGTCCCAAGGCTGGGGGCTACACCCCCCCCCTCTTTTTCCAAGAATGCCTGTC 96351	23 H38TTpAlaProAlaProGUUGUUYTABUYTYTGIYITGIIALAGIUPTOLEU
176 176	9/550 GCCATGCGGCGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
96470 CGTGCCATCACTGCCATTAGACTTGATTTCTGATTGATCTTCCCTTTCATTGTACAGGTC 96411	Alahiahiahiahiayiydiyvaihrginrhiahibibibibibibibibibibibibibibibibibib
176 176	-10-768-566-1 (1-317) x AC106128 (1-210385)
96530 CTTTCCTGAACCTCCTTTCCAGCTTCTTGAGCTCCCAAGCCCTGCTTCCCACTGGCACGT 96471	9 Gaps:
176 176	26.1% Mismatches: 67.7% Indels:
96590 GCCTGTAACCCTAACTTCCCCTCCCTACCCTAGGCTGGATATCTTTTGGGTACTTAA 96531	Score: 1171.00 Matches: 298 Percent Similarity: 26.6% Conservative: 6 Db
176 176	2.12e-90 Length:
96650 TCGGGAACTTTGAGAAGGGGCGGGTAGTTAGGAAAGCGCTTGAAGGCCCTTCATTTCTAC 96591	/rpc_ramry="B3" Db
176 176	repeat_region 1885T.1943 Qy
96710 TAGGCAGTGTCTTTAACCTGAACTACAGGCACCCAGACAAGCACTACTCCCTTCCCTGACC 96651	repeat_region 18710
176 176	repeat_region 1846118491 Qy
96770 GTCCCCATAAATGTCTAAATGCTATATTCCTTTCCTCATCTCAAGGATGCTTGGGATCGC 96711	repeat_region complement()="51 ki" repeat_region complement()="51 ki" Db
176 176	repeat_region complement(17539. 17679) Qy
96830 TGTGCAACTCACAGCACGCCCGGTTTTCCAAGCTGCTGAATCCCTGGGTGTCCTGGAGAC 96771	/rpc_tamily="10_kn" STS
176 176	repeat_region 16614 1875 Qy
96890 TITATAAACTTGAGACTCTGGGTATTCCCACTGGTTCTGTCCTCACTCTGACCTGTGCCT 96831	repeat_region 1593916149

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	176		176
9	95690	CACCTGCCTGGCCCCTGCAAACACATTCAACCTGGTCATAGAGCAGGAGTCACACCCAGA	95631
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9	5630	GCCCTCAGCTCTGCTGACTAGACTACCACATCACACCTGGTTAAGGCAGCATCCATTTCG	95571
	176		176
y	5570	TAGCAAACACTCGATGGGACTTAAAACGTAAAAGCTTAGAACATAATGTATGCCATGGCT	95511
	176		176
y	95510	GCGGAAGAGTGCCTACCTCAACATAGTGCCTACCTCAACATAGTGTCTCTACACTATCGA	95451
	176		176
9	5450	ACTCTTGAATTGTCACCGTCACTCAGTCATTGCCATCCTCCCCTTAGGAATTGAGAGCAG	95391
	176		176
y	95390	TTTTTTGTGAGGAAGGGGCTAATGGAGGAGCCTGTACTGTCCTGGCTGTTTGGAACCCCCA S	95331
	177	ValThrLysIleCysAlaGlnCysGluMetGluHisSe 1	189
9	95330		95271
	189	rAlaAspGlyLeuMetGluGlnMetCysSerSerAspPhe	202
9	5270		95211
	202		202
9	5210	ACCAAAGCCCTGACTGCCTCCCAGCAACCTGGCTCAGAGCCAGCC	95151
	202		202
vo	5150	TACTTCGACTGTGTTTTGTTACTTTCCCGGAGATGCTGGGCTGTCTTTTCTAGGGGGAGC S	95091
	202		202
vo	5090	AAGCTCAGCTTGCTAAGCGGTAGATGGGGCCCTCCCAGGACACGGGAGTGTGCAATAGAA S	95031
	202		202
9	95030	GTAATGTCCCCTGCCCTGGCATCTCCACTGAGTACCCAGTGTCCCTCTGGCTAGTGTGG S	94971
	202		202
9	94970	GTCATTACTAGCTTTCCCCACAGATTCATCTTGGACTCTTCTATCCGGGGACGGCTGAAC	94911
	202		202
9	94910	CAAGCCAGTTAGGACCAAGCTCACTGTGGGCCACAGAGTTCTGCATGCGATCTTTGCAAA S	94851
	202		202
9	4850	GTTGGTTCTGTTTTGTGTCCTAGCCTCCCTGTCTATAAAAACAGGGGAAGGAGCAGTGAC	94791
	202		202
y	4790	GAAATCCATGCTTCAGAGGAATCTTTATGTCGGGAGCGTCTTTGGAAAGAAA	94731
	202		202
9	4730	ATATTGCAGAGGGCGGGCACAGGGGGAGGGAAGGGGAGGATGTGTTAGACAATGCCC 9	94671

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Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y., Collymore, A., Cook, A., Cooke, P., Corum, B., DeArellano, K., Dlaz, J.S., Dodge, S., Dooley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagopian, D., Hagos, B., Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Jones, C., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Ngyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Rachupka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stobbs, M., Tasvers, M., Vassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Vassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X.,
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Birren,B., Nusbaum,C., Lander,E., Abouelleil,A., Allen,N., Anderson,M., Arachbhl,H.M., Barna,N., Bastien,V., Bloom,T., Anderson,M., Arachbhl,H.M., Barna,R., Abouellein,V., Bloom,T.,
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Direct Submission
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Submitted (01-OCT-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Jul 26, 2003 this sequence version replaced gi:32401630.
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Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
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------- Project Information
Center project name: L25239
Center clone name: 213_B_12
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Center: Whitehead Institute/ MIT Center for Genome Research
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5343. .5346
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site:MboI"
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Cambridgeshire, CB10 1SA, UK. E-mail enquirles: humguerv@aanger.ac.uk Clone requests: clonerequest@sange:	y 203 203
TITLE Direct Submission JOURNAL Submitted (07-AUG-2002) Wellcome Trust Sanger Institute, Hinxton,	25998 GAGTCCCTAGTGTTCCTCTGGCTGGGATGGGTTATGACTAGCTTTCCCCACGGCTTCATC 25939
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ACCESSION AL603804 VERSION AL603804.18 GI:21998175	γ 203 203
DEFINITION Mouse DNA sequence from clone RP23-470C16 on chromosome 11, complete sequence.	b 26178 CCCCACCTGACTACCGCTACTGCAGCTGTTTTGTCACTTCCCATAGAGATGCTTCCAT 26119
189196 bp DNA linear ROD	203 203
RESULT 15)b 26237 TGG-TGAGTGTGGAATCACAGGATCCTGACAGTTCCCGCAGCAGCCTGGCTCAGAACCAG 26179
25158	y 202 eVal 203
Qy 312 yAlaAlaGluProHis 317	2629 / CCAGTGIGAGATGGAGCACAGCGCTGATGGCCTCATGGAACAGATGTGCTCCAGTGACTT
25218 GTTTGCAGTCAAATTCATGTTCTCCTATTCCCTCTACTACCCTTTTTTCTATGG	182 aGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSerAspPh 2
Qy 292 sPheAlaValLysPheMetPheSerTyrProCysSerLeuTyrTyrProPhePheTyrGl 312)b 26357 GTCCTGCTGTTTAAGACCACACCCACTTTGCTTTCTCTCTTCAGTGACCAAGATCTGTGC 26298
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Qy 272 lAspGlyGlnLeuLeuMetAlaValTyrArgTrpAspLysLysAsnLysGluMetLy 292	Db 26417 TCCTCTTTAGTAATTAGAGCAGCTTCTGTGAGGAGGGGGGGCTAAGGGAGGAGCCTGTACT 26358
25338	176
25	b 26477 GAATCTACCTCACCATACTGTCCCTGCACTATATGAGCTCTTGAATTGTCATTGCCATCC 26418
25398 AGGCCCTTAAAGCGCAAGGACACCAAGAAGCTGGTCCTGCATATGAAGAACGGGGCAAG	γ 176 176
232 oGlvProLeulvsArgLvsAspThrlvsArgLeuValLeuHisMetLvsAspGlvAlaGl	26537 CACAGCAAGCACTAGATGGAATAAAACTTAGACTGTAATGTATGT
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212	b 26597 AGGCTACCACATTACACCTGGTTTTCCTCTGCTGATAAGTAGAAAAGGCAGTGCCCGTTT 26538
25518 CTTCTGACCATCCTTTGCCCACCTTGCCACAGTGGTCAAGATGCGCATTAAGGAGATCAA	γ 176 176
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers givin the feature table with their source databases: Em. EMBL; Sw., SWISSPROT; Tr., TREMBL; Wp., WORMPEP; Information on the WORMPEP database can be found at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-470C16 from the RPCI-23 Mouse PAC Library constructed by the group of Pietter de Jong. For further details see http://www.chori.org/bacpac/home.htm
                                                                                                                                                                                   ProGluMetLeuHisCysHisLysPheProLeuAspAsnAspLeuCysIleAlaValGln
                                                                                                                                                                                                                                                                                TRECTETGETCTGCTCTCGCTCCCGTCTGCCTGGACCGATCTACCCCTGCCGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                GlyTyrLysArgMetArgLeuProAsnLeuLeuGluHisGluSerLeuAlaGluValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TyrSerLysProProGlnCysLeuAspIleProAlaAspLeuProLeuCysHisThrVal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTGGAGCGCACGGCCGCACTGGCGTTGCTGCTCGGGGCGCTGCATGGGGCGCCA
                                                                                                                                 LeuCysGluAlaValArgAlaGlyCysAlaProLeuMetGluAlaTyrGlyPheProTrp
                                                                                                                                                                                                                                                                                                 PheLeuCysSerLeuPheAlaProValCysLeuAspArgProIleTyrProCysArgSer
                                                                                                                                                                                                                                                                                                                                       CAGCAGGCAAGCAGCTGCCACTGCTGGCCAAGCGCTGCCACTCAGACACCCAGGTC
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AGCGCCCTGGCACTGTCTCCTTTTCCAACCTTTATAAACTTGAAGCTCTGGGTAT
                                                                                                            TTCGGGCACCTGCCACCGCGCCTCCAGGTAGCGCCTTTGCGCCCAGAGCGCCTCGG
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202 98308	aGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSerAspPh 	182 98249
98248	GTCCTGCTGTTTAAGACCACACCCACTTTGCTTTCTCTCTC	98189
182	ValThrLysIleCysAl	177
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문	98908	GTTGGGGAGGCTAGCTGTGGAAGAAGGGTGGAGCTAGCCAGAGGGTCCTCTCCCCTAGGAT 98967
γŞ	203	203
뮹	98968	TCCTGTCCCTAGGTCTCTGGTCACACTAGGGCTCCCGCTGTCATAAGCAAATGTGACCCT 99027
Ş	204	VallysMetArgIleLysGluIleLy 212
Ъ	99028	CTTCTGACCATCCTTTGCCCACCTTGCCACAGTGGTCAAGATGCGCATTAAGGAGATCAA 99087
Ş	212	sIleGluAsnGlyAspArgLysLeuIleGlyAlaGlnLysLysLysLysLysLeuLeuLysPr 232
뮹	99088	GATAGACAACGGGGACCGAAAGTTGATTGGAGCCCAGAAGAAGAAGAAGCAGCTGCTCAAGGC 99147
Ş	232	oGlyProLeuLysArgLysAspThrLysArgLeuValLeuHisMetLysAsnGlyAlaGl 252
DЬ	99148	AGGCCCCTTAAAGCGCAAGGACACCAAGAAGCTGGTCCTGCATATGAAGAACGGGGCAAG 99207
Ş	252	yCysProCysProGlnLeuAspSerLeuAlaGlySerPheLeuValMetGlyArgLysVa 272
В	99208	CTGCCCTTGCCCACAGTTAGACAACCTGACGGGCAGCTTCCTGGTCATGGGCCGCAAAGT 99267
Ş	272	lAspGlyGlnLeuLeuMetAlaValTyrArgTrpAspLysLysAsnLysGluMetLy 292
문	99268	AGAGGGACAGCTGCTCACGGCCGTCTACCGCTGGGACAAGAATAAGGAGATGAA 99327
γQ	292	<pre>sPheAlaValLysPheMetPheSerTyrProCysSerLeuTyrTyrProPhePheTyrGl 312</pre>
дb	99328	GTTTGCAGTCAAATTCATGTTCTCCTATCCCTGTTCCCTCTACCTTTTTTTCTATGG 99387
Ś	312	yAlaAlaGluProHis 317
Db	99388	GCAGCTGAACCCCAC 99403

Search completed: March 23, 2006, 08:42:53 Job time : 5817 secs

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-MODEL-frame+ D2n.model - DEV=xlh
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ABZ82227 ACC81035 ADC71197

ALIGNMENTS

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11984 11984 11988 11988 11988 11186

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Aea18078 Human gyn
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Adh43310 Receptor
Add17401 Human sec
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Abv75536 Breast ca
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Adv44809 Secreted
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Adv58915 Human sec
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Ada38293 Mouse sec Ada38291 Mouse sec Adm66968 Murine ad Aea18078 Human gyn

Human sec Human cDN SARP 3 DN FRPHE nuc Human ATG

AAV19114 ABX75334 AAD52563 ABZ81835 AAV08946 ADA38293 ADA38291

	RESI ADA:	RESULT 1
	X U	ADA38290 standard; cDNA; 954 BP.
	A A	ADA38290;
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	X I	20-NOV-2003 (first entry)
	DE	Human secreted apoptosis related protein (SARP) 3 cDNA coding region.
	XX	
	WX	Human; 88; gene; metabolic disorder;
	KW	Secreted Apoptosis-Related Proteins 3; SARP3; obesity; overweight;
	KW	diabetes; insulin resistance; cachexia; anorexia; beta-catenin; leptin;
	KW	insulin sensitivity; food intake; body weight change; glucose tolera
	KW	hyperplastic growth; cell differentiation; programmed cell death;
ince to have a	KW	apoptosis; hypertrophic growth; modulator; agonist; antagonist;
sult being printed,	W.	antisense; ribozyme; lipid; glucose; insulin; adipocyte; differentiation;
cibution.	W.W.	adipose cell; adipocyte; anorectic; antidiabetic; immunomodulator.
	×	
	80	Homo sapiens.
	×	
	FH	Key Location/Qualifiers
Description	FT	CDS 1954
	FT	/*tag= a
Ada38290 Human sec	FT	/product= "SARP3"
Ada38288 Human sec	×	
Adm66969 Human hom	PN	US2003143610-A1.
Adp56061 Human PRO	×	

Result No.

Score

Length

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Query Match

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ADA38290 ADA38288 2 ADM66969 ADP56061

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Query Match:
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                                                                                                                                                                                        US-10-768-566-1 (1-317)
                                                                                                                                                                                                                                                                                                              Alignment
                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                 Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Identifying a compound for treating a metabolic disorder, e.g., diabetes by assaying the ability of the compound to modulate a Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide
                                                                                                                                                                                                                                                                                                                                               Sequence 954 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 3; 35pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JAN-2002; 2002US-0346523P
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Secreted Apoptosis-Related Proteins 3; SARP3; obesity; overweight; diabetes; insulin resistance; cachexia; anorexia; beta-catenin; leptin; insulin sensitivity; food intake; weight change; glucose tolerance; hyperplastic growth; cell differentiation; programmed cell death; apoptosis; hypertrophic growth; modulator; agonist; antagonist; antisense; ribozyme; lipid; glucose; insulin; adipocyte; differentiation; antisense; ribozyme; lipid; glucose; insulin; adipocyte; differentiation;
                                                                                                                                                                                                                             Human secreted apoptosis related protein (SARP)
                                                                                                                                                                           ss; gene; metabolic disorder;
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                                                                                                                                                                                                                                                                                                                                         The invention discloses a method for identifying a compound for treating a metabolic disorder which comprises assaying the ability of the compound CC to modulate Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide activity. Also claimed are methods for comboulating SARP3 mediated metabolic activity, treating a subject having a cC metabolic disorder characterised by aberrant SARP3 nucleic acid coverweight, diabetes, insulin resistance, cachexia or anorexia. The compound to modulate SARP3 nucleic acid expression or polypeptide activity and a pharmaceutical formulation or cell, or by detecting modulation of the level of beta-catenin, leptin or insulin sensitivity, food intake, body weight change, glucose tolerance, cell, or by detecting modulation of the level of beta-catenin, leptin or insulin sensitivity, food intake, body weight change, glucose tolerance, hyperplastic growth. Modulating SARP3 mediated metabolic activity comprises contacting a cell or tissue expressing the SARP3 with a SARP3 cc modulator. The compound or modulator comprises a small molecule SARP3 approximates to antagonist or inverse agonist, anti-SARP3 antibody, antisense cadipocytes or programmed cell death. Treating a subject having a cell or triasulation of adipose cell progenitors into adipocytes or programmed cell death. Treating a subject having a metabolic disorder characterised by aberrant SARP3 nucleic acid cate capression or polypeptide activity comprises administering a SARP3 cranscripts and inhibite translation or an oligonucleotide that forms a triple helix with the promoter of the SARP3 gene and inhibits transcription. The sequence presented is the burnan SARP3 cranscripts and inhibite translation of the SARP3 gene and inhibits transcription. The sequence presented is the burnan SARP3 cranscripts and the sequence presented is the burnan SARP3 cranscripts and the sequence presented is the burnan SARP3 cranscripts and the sequence presented is the surface.
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human; adipocyte specific; ds; adipose tissue; anti-obesity; high mobility group I-C protein; HMGI-C; obesity; leptin; ob; diabetes;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Identifying adipocyte specific genes, useful for treating obesity diabetes, and for identifying drug targets, by differential gene expression analysis between adipose tissue or stromal vascular tismice of different genotypes.
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                                                                 Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1905 BP; 338 A; 610 C;
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ProLeuCysHisThrValGlyTyrLysArgMetArgLeuProAsnLeuLeuGluHisGlu
                                               CCGCTGCACGGCCGCTCCTACTCCAAGCCGCCGCAGTGCCTTGACATCCCTGCCGACCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This nucleic acid sequence encodes human secreted apoptosis-related CC protein hSARP3 (see AAW37815) that modulates apoptosis through cell-cell CC or cell-extracellular matrix signalling. hSARP3 and hSARP1 (see AAV19113) CC CDNAs were isolated from a human pancreatic library, and hsarp2 (see CC Probe. hSARP3 is expressed predominantly in pancreas. Once isolated, SARP CC nucleic acids can be expressed in usual vectors, either for use in gene CC therapy, or for recombinant SARP production. Antisense probes derived CC from SARP nucleic acids can be used in hybridisation tests for detecting CC levels of expression of SARP mRNA, particularly for diagnosis or CC they are used to detect cancer of the prostate or breast (by detecting CC fine) are used to detect cancer of the prostate or breast (by detecting CC monitoring of diseases associated with SARP expression. Specifically, CC they are used to detect cancer of the prostate or breast (by detecting CC monitoring of diseases associated with SARP expression. Specifically, CC they are used to detect cancer of the prostate or breast (by detecting CC antisense fragments can also be used to treat such cancers, or more CC generally apoptosis-related disease (e.g. infection with HIV or CC creparfusion injury), also (not claimed) to prevent apoptosis in cultured CC cells, to improve preservation of organs for transplantation, for in situred cells, to improve preservation of organs for transplantation, for in situred contents.
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WO200290992-A2

Modulating the differentiation of embryonic stem cells by providing ligands which bind receptors in the Notch and Wnt pathways, useful for treating diseases such as Parkinson's, Huntington's, heart disease, diabetes and AIDS.

Claim 18; Fig 79; 121pp; English.

The invention relates to modulating the differentiation of an embryonic constraints one ligand or its active binding fragment, capable co of binding its cognate receptor polypeptide expressed by the embryonic stem cell; (c) forming a culture comprising embryonic stem cells and the city injuries, and (d) growing the cell culture. Also included are: (1) comprising a cell transfected with a nucleic acid molecule selected from: (c) injury of fully defined wht nucleic acid sequences; (ii) a nucleic caid molecules which are degenerate as a result of the genetic code to codes a ligand capable of modulating a whith receptor; or (iii) nucleic acid molecules which are degenerate as a result of the genetic code to comprising the cell; (2) inhibiting the differentiation of the sembryonic stem cells, (2) inhibiting the differentiation of the sembryonic stem cells. (2) inhibiting the differentiation of the sembryonic stem cells, (2) inhibiting the culture for the maintenance and/or differentiation of the sembryonic stem cells in an undifferentiated state; or (3) inhibiting the differentiation of the sembryonic stem cells, (2) growing the culture for the maintenance of the whit signalling pathway; (b) forming cells in an undifferentiated state; or (3) inhibiting the differentiation of embryonic stem cells, comprising the cell identified in (a) with an embryonic stem cells in an undifferentiated state; or (3) inhibiting the differentiation of embryonic stem cells, comprising the cell dentified in (a) with an embryonic stem cells in an undifferentiated state; or (3) inhibiting what set a result of the comprising the cell dentified in (a) with an embryonic stem cells in an undifferentiate state; and (b) inhibiting what set a result of the comprising the cell dentified in (a) with an embryonic stem cells in the treatment of embryonic stem cells in an office of the methods code to the methods cited above. The therapeutic cell of the cobation of the code in the state; and diseases of the set and the treatment of a composition of ce for use in treatment of diseases such as Parkinson's disease, Huntington's disease, motor neuron disease, heart disease, diabe liver disease (e.g. cirrhosis), renal disease and AIDS (acquired mmunodeficiency syndrome). The present sequence is encodes a Wnt or lotch pathway protein (i.e. a ligand for the method of the invention

Sequence 1984 BP; 353 A; 634 C; 627 G; 370 T; 0 U; 0 Other;

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fied.	eening; toxicology assay; signalling pathway; SARP 3; gene; ds.	NA.	003 (first entry)		standard; DNA; 1984 BP.	CCCTGCTCCCTCTACCTACCCTTTCTTCTACGGGGGCGGCAGAGCCCC	TyrProCysSerLeuTyrTyrProPhePheTyrGlyAlaAlaGluProHis 317	CCGCTGGGACAAGAAGAATAAGGAGATGAAGTTTGCAGTCAAATTCATGTTCTC	ValTyrArgTrpAspLysAsnLysGluMetLysPheAlaValLysPheMetPheSer 300	GGCAGCTTCCTGGTCATGGGCCGCAAAGTGGATGGACAGCTGCTGCTCATGGC	LeuAlaGlySerPheLeuValMetGlyArgLysValAspGlyGlnLeuLeuLeuMetAla 280	AAGCGGCTGGTGCACATGAAGAATGGCGGGGCTGCCCCTGCCCACAGCTGGACAGC 995	ArgLeuValLeuHisMetLysAsnGlyAlaGlyCysProCysProGlnLeuAspSe	CCCTGAAGCGCAAGGAC	leGlyAlaGlnLysLysLysLysLeuLeuLysProGlyProLeuLysArgLysAspTh	TGTGGTCAAAATGCGCATCAAGGAGATCAAGATAGAGAATGGGGGACCGGAAG	spPheValValLysMetArgIleLysGluIleLysIleGluAsnGlyAspArgLysLe	TGCGCCCAGTGTGAGATGGAGCACAGTGCTGACGGCCTCATGGAGCAGATGTGCTCCAGT 815	sAlaGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSe	CTCTGCATCGCCGTGCAGTTCGGGGACCTGCCCGCCACCGCGCCTCCAGTGACCAAGATC 755	slleAlaValGlnPheGlyHisLeuProAlaThrAlaProProValThrLyslle 1	GCCTACGGCTTCCCCTGGGCTGAGATGCTGCACTGCCACAAGTTCCCCCCTGGACAACGAC 695	laTyrGlyPheProTrpProGluMetLeuHisCysHisLysPheProLeuAspAsnA	ATCTACCCGTGCCGCTCGCTGCGCGAGGCCGTGCGCGCCGGCTGCGCGCCGCTCATGGAG 635	leTyrProCysArgSerLeuCysGluAlaValArgAlaGlyCysAlaPr	CACTCGGATACGCAGGTCTTCCTGTGCTCGCTCTTTGCGCCCGTCTGTCT	isSerAspThrGlnValPheLeuCysSerLeuPheAlaProValCysLeuAspArgPr	TGGCTGCCGCTGCTGGCCAAC	erLeuAlaGluValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCy	CCGCTCTGCCACACGGTGGGCTACAAGCGCATGCGGCTGCCCAACCTGCTGGAGCACGAG 455	roLeuCysHisThrValGlyTyrLysArgMetArgLeuProAsnLeuLeuGluHis	CGCTGCACGGCCGCTACTACAGCCGCCGCAGTGCCTTGACATCCCTGCCGACCTG 395	roLeuHisGlyArgSerTyrSerLysProProGlnCysLeuAspIleProAlaAspLe	GCGCTGCACTGGGCGCGCCGGCGCGCTGCGAGGAGTACGACTACTATGGCTGGC

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1984
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                                                                                                                                                                                                                                                                                                                               Human; ATG-1709 protein; secreted ligand; 7-Transmembrane receptor; heart disease; hypertension; cardiovascular disease; kidney disease; obesity; insulin resistance; diabetes; Central Nervous System disorder; therapy; sFRP-1; ss.
                                                                                                                                      WPI; 1998-596877/51.
P-PSDB; AAW73507.
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                                                                                                                                                                                                               23-MAY-1997;
08-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                      Human
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                                                                                                                                                                                                                                                                                                                                                                                      ATG-1709 protein coding sequence.
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                                                                                                                                                                                           SMITHKLINE
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                                                                                           secreted protein ATG-1709 polypeptide and polynucleotide diagnostic reagents and for diagnosing, prevention and of Central Nervous System diseases and diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                               97US-0047691P.
97US-00907808.
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This sequence encodes the human ATG-1709 protein of the invention. ATG-1709 is related to human secreted ligands for 7-Transmembrane receptors and similar to murine SFRP-1. ATG-1709 polypeptides and polynucleotides are useful for disgnosing susceptibility to diseases by detecting mutations in the ATG-1709 gene using probes containing the ATG-1709 nucleotide sequence, and can diagnose diseases associated with ATG-1709

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Percent Similarity:
Best Local Similarit
Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diabetes; insulin resistance; cachexia; anorexia; beta-catenin; leptin; insulin sensitivity; food intake; body weight change; glucose tolerance; hyperplastic growth; cell differentiation; programmed cell death; apoptosis; hypertrophic growth; modulator; agonist; antagonist; antisense; ribozyme; lipid; glucose; insulin; adipocyte; differentiation; adipocyte; differentiation; adipose cell; adipocyte; anorectic; antidiabetic; immunomodulator.
The invention discloses a method for identifying a compound for treating a metabolic disorder which comprises assaying the ability of the compound to modulate Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide activity. Also claimed are methods for modulating SARP3 mediated metabolic activity, treating a subject having a
                                                                                                                                                                                                                                                             Identifying a compound for treating a metabolic disorder, e.g., diabetes by assaying the ability of the compound to modulate a Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide
                                                                                                                                                                                Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB;
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Secreted Apoptosis-Related Proteins 3; SARP3;
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TTCGGGCACCTGCCTGCCACCGCGCCTCCAGTGACCAAGATCTGTGCCCAGTGTGAGATG
                                  PheGlyHigLeuProAlaThrAlaProProValThrLyBIleCygAlaGlnCygGluMet
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           Identifying a compound for treating a metabolic disorder, e.g., diabetes by assaying the ability of the compound to modulate a Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouse secreted apoptosis related protein
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Identifying adipocyte specific genes, useful for treating obesity or diabetes, and for identifying drug targets, by differential gene expression analysis between adipose tissue or stromal vascular tissue mice of different genotypes.
                                                                                                                                                                                                                                                                                                     murine; mouse; adipocyte specific; ds; adipose tissue; anti-obesity; high mobility group I-C protein; HMGI-C; obssity; leptin; ob; diabet adipogenesis; hypertension; cardiovascular disease; anorectic; antidiabetic; hypotensive; sFRP-5; gene.
                                                                 WPI; 2004-143846/14.
P-PSDB; ADM67241.
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The invention relates to a method of detecting, differentiating, and prognosing a gymecological cell proliferative disorder comprising obtaining a cervicovaginal secretion specimen from an individual, determining the methylation status of at least one or more CpG positions, and determining from the methylation status the presence, classification, and/or prognosis of a gymecological cell proliferative disorder in the individual. The method is useful for detecting, differentiating, and prognosing a gymecological cell proliferative disorder, e.g. dysplasia or low-grade squamous intraepithelial lesions, high-grade squamous intraepithelial neoplasia. The present sequence represents a human gymecological cell proliferative disorder related gene.
                                                                                                                                                                                                                                         Detecting, differentiating, and prognosing a gynecological cell proliferative disorder by obtaining a cervicovaginal secretion specimen from an individual and determining the methylation status of at least or or more CpG positions.
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endometrial cancer; neopalsm; cancer; ds.
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This nucleic acid sequence encodes human secreted apoptosis-related protein hSARP2 (see AAW37817) that modulates apoptosis through cell-cell credit protein hSARP2 (see AAW19113) had hSARP2 cDNA was isolated from a chuman heart library, and hSARP1 (see AAV19113) and hSARP3 (see AAV19113) and hSARP3 (see AAV19113) and hSARP3 (see AAV19112) as probe. hSARP2 is expressed in most human tissues. It has pro-apoptotic activity. Once isolated, SARP nucleic acids can be used in hybridisation tests for detecting levels of cards can be used in hybridisation tests for detecting levels of cards can be used in hybridisation tests for detecting levels of cards can be used in hybridisation tests for detecting levels of cards can be used in hybridisation. Specifically, they are used to detect cancer of the prostate or breast (by detecting hSARP1 or 2, can also be used to treat such cancers, or more generally apoptosis-can also be used to treat such cancers, or more generally apoptosis-can also be used to prevent apoptosis in cultured cells, to improve preservation of organs for transplantation, for in situ preservation for preservation for transplantation, for in situ preservation for cancers accurated the same and the read affects of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells, to improve the cancer of the provent apoptosis in cultured cells.
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                      CTGCTGGAGCACGAGACCATGGCGGAGGTGAAGCAGCAGCAGCAGCTGGGTGCCCCTG
                                                    LeuLeuGluHisGluSerLeuAlaGluValLysGlnGlnAlaSerSerTrpLeuProLeu
                                                                                                                                              IleProAlaAspLeuProLeuCysHisThrValGlyTyrLysArgMetArgLeuProAsn
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                                                                                                                                                                                                          Human; secreted frizzled related protein; sFRP; ischaemia; heart disease;
                                                                                                                                                                                                                                    Human secreted
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                                                                                                                                                                                                                                                                                                           ABZ82228 standard;
                     21-SEP-2001;
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                                            23-SEP-2002; 2002WO-US030100
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(GENE-)
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                                                                                                                                                                                                  vasotropic;
                      2001US-0323816P
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                                                                                                                                                                                                                                   frizzled related protein cDNA

    GAGGGGGÁCGTCTGCÁTCGCCATGACGCCCCAATCCCACCGAAGCCTCCAAG

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The present sequence is that of cDNA encoding human secreted frizzled related protein (8FRP). A variant sFRP cDNA (see ABZ8226) has been identified that is associated with ischaemic heart disease. The variant sequence differs from the present sequence in having a C to G substitution altering the amino acid at position 174 of the encoding protein from Pro to Ala. The invention provides sFRP variant nucleic acids, vectors, host cells, and methods of producing the variant polypeptide. The variant sFRP nucleic acids and polypeptides can be us to identify agents which modulate the expression or activity of the polypeptide, to identify binding partners for the protein, to raise antibodies, and as diagnostic, prognostic and therapeutic agents for ischaemic heart disease
                                                                                                                                                                                                                                                                                                                                        New isolated nucleic acid encoding a human secreted frizzled related protein, useful for preparing a composition for treating ischemic heart
                                                                                                                                                                                                                                                                                 Disclosure; Page 47-49; 57pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (PROC ) PROCTER & GAMBLE
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Sequence 2094 BP; 484 A; 598 ű 631 G; 381 Ţ, 0 Ç, 0 Other;

Best Local S Query Match:

Percent Similarity: Best Local Similarity:

5.07e-82 924.50 72.8% 56.6% 53.4%

Length:
Matches:
Conservative:
Mismatches:
Indels:
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                                                                                 AlaProLeuMetGluAlaTyrGlyPheProTrpProGluMetLeuHisCysHisLysPhe
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                                                             GAGCCGGTCATGCAGTTCTTCGGCTTCTACTGGCCCGAGATGCTTAAGTGTGACAAGTTC
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 CCC---GAGGGGGÁCGTCTGCÁTCGCCATGACGCCGCCCAATCCCACCGAAGCCTCCAAG
                          ProLeuAspAsnAspLeuCysIleAlaValGlnPheGlyHis---LeuProAlaThrAla
                                                                                                                            TGCCTGGACCGGCCCATCTACCCGTGTCGCTGCCTGCGAGGCCGTGCGCGACTCGTGC
                                                                                                                                                    CysLeuAspArgProIleTyrProCysArgSerLeuCysGluAlaValArgAlaGlyCys
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Search completed: March 23, 2006, 07:03:31 Job time : 698 secs

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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-Q=/abss/ARSSWEB_spool/US10768566/runat_22032006_155809_25271/app_query.fasta_1
-Q=/abss/ARSSWEB_spool/US10768566/runat_22032006_155809_25271/app_query.fasta_1
-DB=EST -QFMT=fastap -SUFFIX=p2n.rst -MINMATCH=0.1 -LOOPECL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFWT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000 -HOST=abss04
-USER-US10768566_9CGN_1 _5315_9runat_22032006_155809_25271 -NCPU=6 -ICPU=3
-NO_MMAP -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -DEV_TIMEOUT=120
-NARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPEXT=7
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1730
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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No.	Score	Query Match	Query Match Length DB ID	BB	ID	Description
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N	1421	82.1	875	ĭ	AY410883	AY410883 Homo sapi
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AW95/689 ES1369/59 CK686080 ZF101-P00 BX521125 BX521125 CX337082 JGI ZZT19 CX401961 JGI ZZT49 DN677708 CFW94-H02	, , , , , , , , , , , , , , , , , , , ,	Hamajasyota £923902. BP329610 AGENCOUR BY741671 MUS MUSC MUS MUSC CHW18-D1 UI-M-FIO UI-M-FIO GROADA2 AMGNUC: BP920. pk BP920. pk AGENCOUR UI-FOID CGX38-HO CGX38-HO	

ALIGNMENTS

COMMENT	REFERENCE AUTHORS TITLE JOURNAL	AUTHORS TITLE JOURNAL REMARK	KEYWORDS SOURCE ORGANISM	RESULT 1 CR596705 LOCUS DEFINITION ACCESSION VERSION
- Web: www.genoscope.cns.fr) 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.	2 (bases 1 to 1819) 2 (bases 1 to 1819) Genoscope. Direct Submission Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : Bp 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr	Li.W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600	HTC; CNSLT_cDNA. Homo sapiens (human) Homo sapiens Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1819)	CR596705 CR596705 1819 bp mRNA linear HTC 17-APR-2005 full-length cDNA clone CS0DF024YP06 of Fetal brain of Homo sapiens (human). CR596705 CR596705.1 GI:50477512

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                                                                                                                AspPheValValLysMetArgIleLysGluIleLysIleGluAsnGlyAspArgLysLeu
                                                                                                                                        CTCTGCATCGCCGTGCAGTTCGGGCACCTGCCGCCACCGCCCTCCAGTGACCAAGATC
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                                LysArgLeuValLeuHisMetLysAsnGlyAlaGlyCysProCysProGlnLeuAspSer
                                                                      IleGlyAlaGlnLysLysLysLysLeuLeuLysProGlyProLeuLysArgLysAspThr
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/mol type="mRNA"
/db_Xref="texon:9606"
/clone="CSODF024YP06"
/tissue_type="Fetal brain"
/plasmid="pCMVSPORT_6"
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Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.

Direct Submission
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Inferring nonneutral evolution from human-chimp-mouse orthologous
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Science 302 (5652), 1960-1963 (2003)
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genomic survey sequence.
AY410883
AY410883.1 GI:39766851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
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                                                              SerLysProProGlnCysLeuAspIleProAlaAspLeuProLeuCysHisThrValGly
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                                                                                                                       ArgCysGluGluTyrAspTyrTyrGlyTrpGlnAlaGluProLeuHisGlyArgSerTyr
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/mol_type="genomic DNA"
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<1._.>875
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                                                          Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001)
On Feb 13, 2001 this sequence version replace Contact: Genoscope
                                                                                                                                                             Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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AL538532.3 GI:45714242
EST.
Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segref@genoscope.cns.fr
18t strand cDNA was primed with a NotI-oligo(dT) primer. F.
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This sequence belongs to sequence cluster 5245.r

For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s-CSODFO24DH03QP1&c=5245.r.

Location/Qualifiers
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/dev stage="fetal"
/dev stage="fetal"
/clone_lib="Homo sapiens FETAL BRAIN"
/note="Organ: brain; Vector: pCMVSPORT_6; 1st strand cDNP
was primed with a NotI-oligo (dT) primer. Five prime end
was primed with a NotI-oligo (dT) primer. Five prime end
cariched, double-strand cDNA was digested with Not I and
cloned into the Not I and EcoRV sites of the pCMVSPORT 6
vector. Library was not normalized."
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/mol_type="mRNA"
/db_xref="taxon:9606"
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1 (bases 1 to 873)
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                                                                                                                                                                                                                                    /organism="Pan troglodytes"
/mol_type="genomic DNA"
/db_xref="taxon:9598"
                                                                                                                                                                                          /gene="SFRP5"
/locus_tag="HCM4039"
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; But
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
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GSS 16-DEC-2003

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Science 302 (5652),
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 CACAGCGCTGATGGCCTCATGGAACAGATGTGCTCCAGTGACTTTGTGGTCAAGATGCGC
               HisSerAlaAspGlyLeuMetGluGlnMetCysSerSerAspPheValLysMetArg
                                                                                 GlyHisLeuProAlaThrAlaProProValThrLysIleCysAlaGlnCysGluMetGlu
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/locus_tag="HCM4039"
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/mol_type="genomic DNA"
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RESULT 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 819)
Uenishi,H., Eguchi,T., Suzuki,K., Sawazaki,T., T
Okumura,N., Hamasima,N. and Awata,T.
PEDE (Pig EST Data Explorer): construction of a
derived from porcine full-length cDNA libraries
Nucleic Acids Res. 32 (1), D484-D488 (2004)
                                                                                                                                                                                                                                                                                           Email: huenish@affrc.go.jp

EST project with full-length enriched cDNA libraries carried out

EST project with full-length enriched cDNA libraries carried out

Animal Genome Research Program (Japan) by National Institute of

Agrobiological Sciences and STAFF-Institute

Single pass sequencing of clones derived from oligo-capped cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                   Animal Genome Laboratory, Genome Research Department
National Institute of Agrobiological Sciences
2 kenodai, Tsukuba, Ibaraki 305-8602, Japan
                                                                                                                                                                                                                and crossmatch version 0.990319
Low quality bases were trimmed based
                                                                                                                                                                                                                                                    library
Vector sequences were eliminated by RepeatMasker version 2002/07/13
                                                                                                                                                                                                                                                                                                                                                                                                  Tel: +81-29-838-8627 Fax: +81-29-838-8627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sus scrofa (pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Hirohide Uenishi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14681463
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                                                                                        /organism="Sus scrofa"
/mol_type="mRNA"
/db_xref="taxon:9823"
/clone="TCH01H100038"
                                   /tissue_type="trachea"
/dev_stage="adult"
/clone_lib="full-length
                                                                                                                                                                                                Location/Qualifiers
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                                                                            ACCESSION
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                      CK626659

Mmj24f01.y1 Mouse RPE/choroid, unan clone mj24f01 5', mRNA sequence. CK626659

CK626659

CK626659.1 GI:41347545

EST.

Mus musculus (house mouse)

Mus musculus
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
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1 (bases 1 to 635)

Ida, H., Boylan, S., Weigel, A., Smit-McBride, Z., Chao, A., Buchoff, P., Wistow, G. and Hjelmeland, L.

Expressed sequence tag analysis of mouse RPB/choroid Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Section on Molecular Structure and Function National Eye Institute 6/331, NIH, Bethesda, MD 20892-2740, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: graeme@helix.nih.gov
Plate: 24 row: f column: 0:
Seg primer: M13RP1 reverse p:
Location/Qualifiers
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Fax: 301 496 0078
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                                                                   AlaValGlnPheGlyHisLeuProAlaThrAlaProProValThrLysIleCysAlaGln
                                                                                                                               TTCCCTTGGCCCGAGATGCTGCACTGCCACAAGTTCCCCCCTGGACAACGACCTCTGCATC
                                                                                                                                                       PheProTrpProGluMetLeuHisCysHisLysPheProLeuAspAsnAspLeuCysIle
                                                                                                                                                                                                                    TGCCGCTCGCTGTGCGAAGCCGTGCGCGCCGGCTCCGCTCATGGAGGCCTACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib=Mouse RPE/choroid, unamplified: mi/mj"
/clone_lib=Mouse RPE/choroid, unamplified: mi/mj"
/note=Toggan: Eye; Vector: pSportl; 64ug total RNA was
extracted from 200 adult male mouse RPE/choroids. A
directionally cloned cDNA library in the pSpORT1
vector(Life Technologies) was constructed at Bioserve
Biotechnology (Laurel MD) essentially following the
protocols of the SuperScript Plasmid System full details
of which are contained in the manufacturer's Instruction
manual (http://www.lifetech.com/). First strand synthesis
was carried out using a Not I primer-adapter
[5'.pGACTAGTTCTAGATCGCGAGCGCCCC(T)15-3']. cDNA was
cloned in Not I/Sal I sites. EST analysis was performed on
the unamplified library at the NIH Intramural Sequencing
Center (NISC)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="RPE/choroid"
/dev_stage="Adult"
/lab_host="EMDH10B"
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/strain="C57B16J"
/db_xref="taxon:10090"
/clone="mj24f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="Male"
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BX715714
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                                                                                                                                                                                                                                                                                                                                                                                                   Email: trop@sanger.ac.uk
Sanger Xenopus tropicalis EST project 2001
TROPICALIS ESQUENCE ID: TTpA040d06.plkSP6
Sequencing primer: SP6
This sequence is from a Xenopus Gene Collection (XGC) library
                                                                                                                                                                                                                                                                                                       constructed by Nigel Garrett.

CDNA was oligo dT primed from 5ug of poly A+ RNA from tadpole embryos. EcoRI-NotI cut cDNA was then ligated into pCS107 with EcoRI at the 5' end and NotI at the 3' end.

Vector: pCS107; Site 1: EcoRI; Site_2: NotI Host: Escherichia coli DH10B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Croning, M.D.R., Ashurst, J.L., Taylor, R., Zorn, A.M. s
Sanger Xenopus tropicalis EST project 2001 (11_2003)
Unpublished (2003)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sanger Institute
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1 (bases 1 to 934)
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BX715714.1 GI:38388283
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                                                                                           /dev_stage="tadpole (stage 35-40)"
/lab_host="E. coli DH108"
/clone_lib="XGC-tadpole"
/clone_lib="XGC-tadpole"
/note="Vector: pCS107; Site_1: EcoRI; Site_2: NotI; cDNA
was oligo dT primed from Sug of poly A+ RNA from tadpole
embryos. EcoRI-NotI cut cDNA was then ligated into pCS107
with EcoRI at the 5' end and NotI at the 3' end"
                                                                                                                                                                                                                          /organism="Xenopus tropicalis"
/mol_type="mRNA"
/db_xref="taxon:8364"
                                                                                                                                                                                                           clone="TTpA040d06"
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Xenopus tropicalis (western clawed frog)
Xenopus tropicalis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                       BX719991
BX719991.1 GI:38392732
                                                                                             BX719991 934
BX719991 XGC-tadpole Xenopus
mRNA sequence.
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Best Local Similarity:
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CDNA was oligo dT primed from Sug of poly A+ RNA from tadpole embryos. EcoRI-NotI cut CDNA was then ligated into pCS107 with EcoRI at the 5' end and NotI at the 3' end.

Vector: pCS107; Site 1: EcoRI; Site 2: NotI

Host: Escherichia coli DH10B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sanger Xenopus tropicalis EST project 200 TROPICALIS_SEQUENCE_ID: TTpA040d07.plkSP6 Sequencing_primer: SP6
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1 (bases 1 to 934)

Croning,M.D.R., Ashurst,J.L., Taylor,R., Zorn,A.M. an Sanger Xenopus tropicalis EST project 2001 (11_2003)

Unpublished (2003)
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This sequence is from a Xenopus Gene Collection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Croning MDR
                                                                  GlyPheProTrpProGluMetLeuHisCysHisLysPheProLeuAspAsnAspLeuCys
                                                                                                                                    HisGlyArgSerTyrSerLysProProGlnCysLeuAspIleProAlaAspLeuProLeu
                                                                                                                                                                                                          GATACTCAGCTCTCCTCTGCTCCCTTTTTGCTCCCATTTGCTTGGAAAGACCCATTTAT
                                                                                                                                                                                                                              AspThrG1nValPheLeuCysSerLeuPheAlaProValCysLeuAspArgProIleTyr
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                                                                                                                                                                                                                                                                                              AlaGluValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCysHisSer 102
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ATCACTGTGCAGTTTGGCAGCAAACAAGTCACTCAGCCACCAGTGACCAAGATTTGCACT
                                IleAlaValGlnPheGlyHisLeuProAlaThrAlaProProValThrLysIleCysAla
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /dev_stage="tadpole (stage 35-40)"
/lab_host="E. coli DH108"
/clone_lib="XGC-tadpole"
/clone_lib="XGC-tadpole"
/note="Vector: pCS107; Site_1: EcoRI; Site_2: NotI; cDNA
was oligo dT primed from Sug of poly A+ RNA from tadpole
embryos. EcoRI-NotI cut cDNA was then ligated into pCS107
with EcoRI at the 5' end and NotI at the 3' end"
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/mol_type="mRNA"
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                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
plate: LLAM13557 row: f column: 07
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NIH-MGC http://mgc.nci.nih.gov/.
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                                                                                                                                                                                                                                                                                                       High quality sequence start: 176
High quality sequence stop: 765.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Unpublished (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
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                /clone lib="Lupski dorsal root ganglion"
/note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
Not1; Site_2: Sall; coNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
5'-TCGACCCACGCGTCCG-3' and
5'-GACTAGTTCTAGATCGCGAGCGGCCGCCCT(15)-3'. Size selected
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/lab_host="DH10B"
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/clone="IMAGE:6178182"
                                                                                                                                                                                   sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                          ganglia"
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RESULT 11
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Best Local Similarity:
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BP329572 Sugano cDNA library, rectum Homo sapiens
                                                                         --ProLeuLysArgLys
                                                                                                                                                                                                                                                                                                                                  LeuCysIleAlaValGlnPheGlyHisLeuProAlaThrAlaProProValThrLysIle
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                                                                                                                                    GGAAAGCTGGATTGGGACGCCCCGAAGAAAGGAAAGAAGGCTGTGCTCCAAGCCCCGGGC
                                                                                                                                                              rgLysLeu---IleGlyAlaGlnLysLysLysLys-----LeuLeuLysProGly-
                                                                                                                                                                                             GGACTTTGTGGGCCAAAATGCGCCATCCAGGGAGATCCAGGATAGAAGAATGGGGGACCC
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Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Jag
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae; Homo.

1 (bases 1 to 593)

Suzuki,Y., Yamashita,R., Shirota,M., Sakakiba
Suzuki,Y., Yamashita,R., Shirota,M., Sakakiba
Mizushima-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes
block structure in the promoter regions
Chemome Res. 14 (9), 1711-1718 (2004)
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BP329572
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                                   LysValAspGlyGlnLeuLeuLeuMetAlaValTyrArgTrpAspLysLysAsnLysGlu
                                                                                          AlaGlyCysProCysProGl
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                                                                                                                                                                                             ATCAAGATAGAGAATGGGGACCGGAAGCTGATTGGAGCCCAGAAAAAGAAGAAGCTGCTC
                                                                                                                                                                                                                                                        GACGGCCTCATGGAGCAGATGTGCTCCAGTGACTTTGTGGTCAAAATGCGCATCAAGGAG
                                                                                                                                    AAGCCGGGCCCCTGAAGCGCAAGGACACCAAGCGGCTGGTGCTGCACATGAAGAATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="rectum"
/clone_lib="Sugano cDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                          Conservative: Mismatches: Indels:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: est@watson.wustl.edu
Library constructed and donated by J. McCarrey, Ph.D. (Southwest
Foundation for Biomedical Research, Dept. of Genetics) - excision
done by E.M. Eddy, Ph.D. (National Institutes of Health, National
Institute of Environmental Health Sciences).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 566)

McCarrey, J., Eddy, M., Marra, M., Hillier, L., Clifton, S., Pape, D.,
Martin, J., Wylie, T., Dante, M., Bowers, Y., Theising, B., Gibbons, M.,
Ritter, B., Tsagareishvili, R., Ronko, I., Maguire, L., Kennedy, S.,
Ritter, J., Waterston, R. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CF982574 566 bp mRNA linear EST 18-DEC-2 maj65906.yl McCarrey Eddy 18 day preleptotene spermatocytes Mus musculus cDNA clone IWAGE:7030088 5' similar to TR:QSWU66 Q9WU66 SECRETED FRIZZLED-RELATED PROTEIN 5. ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Murcidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIEHS Mouse
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Contact: McCarrey/Eddy NIEHS Mouse
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    Location/Qualifiers
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                                                                                                                                                      spermatocytes"
                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="18-day preleptotene spermatocytes"
/lab_host="DH10B (phage-resistant)"
/clone_llb="McCarrey Eddy 18 day preleptotene
                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone="IMAGE:7030808"
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1 (bases 1 to 611)

1 (bases 1 to 611)

Wistow,G., Bernstein,S.L., Ray,S., Wyatt,M.K., Behal,A.,

Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.

Expressed sequence tag analysis of adult human iris for the NEIBank

Expressed sequence tag analysis of adult human iris for the NEIBank

Project: steroid-response factors and similarities with retinal
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                                                                   Section on Molecular S
National Eye Institute
6/331, NIH, Bethesda,
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Tel: 301 402 3452
Fax: 301 496 0078
Email: graeme@helix.nih.
Plate: 23 row: g colum
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Mol. Vis. 8 (4), 185-195 (2002)
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                            CysSerLeuTyrTyrProPhePheTyrGlyAlaAlaGluProHis
                                                                                    ArgTrpAspLysLysAsnLysGluMetLysPheAlaValLysPheMetPheSerTyrPro
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Location/Qualifiers
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//clone_Torgan: Eye; Vector: pcMvSpRT6; A human iris
//note="Torgan: Eye; Vector: pcMvSpRT6; A human iris
library (bx) was normalized by self-subtraction. One
portion of double stranded plasmid DNA representing the
library was linearized by NotI. This NotI digested library
was used as a template for biotinylated RNA synthesis
using SP6 RNA polymerase. Another portion of the double
stranded plasmid library was converted to single-stranded
circles in vitro using Gene II and Exonuclease III (Life
Technologies). Single-stranded DNA (1 mg) was hybridized
(COt 500) with 41 mg of Bio-RNA and vector blocking
oligonucleotides. The hybridized Bio-RNA/ss-circles were
removed by streptavidin:phenol extraction. EST analysis
was performed on the library at the NIH Intramural
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/dev_stage="Adult"
/lab_host="EMDH10B"
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/clone="fg23g02"
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Suzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y.,
Mizushima-Sugano, J., Nakai, K. and Sugano, S.
Sequence comparison of human and mouse genes reveals
block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Department of Virology
Institute of Medical Science, Uni
1-5-1, Shirokanedai, Minatoku, To
Email: ysuzuki@ims.u-tokyo.ac.jp.
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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                              AlaGlyCysProCysProGlnLeuAspSerLeuAlaGlySerPheLeuValMetGlyArg
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 GCGGGCTGCCCCT
                                                                                   LysProGlyProLeuLysArgLysAspThrLysArgLeuValLeuHisMetLysAsnGly
                                                                                                                                    ATCAAGATAGAGAATGGGGACCGGAAGCTGATTGGAGCCCAGAAAAAGAAGAAGCTGCTC
                                                                                                                                                        IleLysIleGluAsnGlyAspArgLysLeuIleGlyAlaGlnLysLysLysLysLysLeuLeu
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Minatoku, Tokyo 108-8639, Japan
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Daniela S. Gerhard, Ph.D.
Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 RmlOA07 Bethesda, MD 20892
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Michael Brownstein
CDNA Library Preparation: Invitatory Corp
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     957 bp mRNA linear ES1
AGENCOURT 14375702 NIH MGC 181 Homo sapiens cDNA clone
IMAGE:30408866 5', mRNA sequence.
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1 (bases 1 to 957)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalia; Eutheria;
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MetArgAlaAlaAlaAlaGlyGlyValArgThrAlaAlaLeuAlaLeuLeuLeuCly
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                                                                                                                                                                                                                                                                 /Clone="IMAGE:30408866"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
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                              aThrAlaProProValThrLysIleCysAlaGlnCys
                                                                                   GCTTACCGCTTCCCCTGGCCTGAGATGCCGCACTGCCACAAGTTTCCCCCCTGGACAACGA
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Search completed: March 23, 2006, 08:19:42 Job time: 4515 secs

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-DB=Published Applications NA_Main -QFMT=fastap -SUPFIX=p2n.rnpbm
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-MARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7
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Ygapop 10.0 , Ygapext
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Sequence 2105, Appl Sequence 56, Appl Sequence 56, Appl	equence 19 equence 14: equence 1,	e 11, e 12,	equence 20. equence 1, equence 12 equence 11 equence 2, equence 4.	equence 85 equence 42 equence 85 equence 15 equence 21	equence 9, equence 1, equence 1, equence 1, equence 28 equence 1, equence 42	Sequence 18, Appl Sequence 18, Appl Sequence 1, Appli Sequence 3306, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli

ALIGNMENTS

RESULT 1 US-10-338-604-3

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Sequence 3, Application US/10338604

Publication No. US20030143610A1

GENERAL INFORMATION:

APPLICANT: Xu, Haiyan

APPLICANT: Xu, Haiyan

ITLE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC

ITILE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC

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ITILE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC

ITILE OF INVENTION: NUMBER: 60/346,523

PRIOR APPLICATION NUMBER: 60/346,523

PRIOR APPLICATION NUMBER: 60/346,523

PRIOR FILING DATE: 2002-01-08

I NUMBER OF SEQ ID NOS: 6

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 3

LENGTH: 954

TYPE: DNA

OGANISM: Homo sapiens

US-10-38-604-3

Alignment Scores:

2.04e-205

Percent Similarity: 100.0%

Best Local Similarity: 100.0%

Gaps: 0

OBS:

DB:
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US-10-768-566-1 (1-317) x US-10-338-604-3 (1-954)

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RESULT 2
US-10-338-604-1
; Sequence 1, Application US/10338604
; Publication No. US20030143610A1
; GENERAL INFORMATION:
; APPLICANT: XU, Haiyan
; TITLE OF INVENTION: DISORDERS, INCLUDING OBESITY AND DIABETES
; FILE REFERENCE: MPI01-250P1RM
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CCURRENT FILING DATE: 2003-01-08
PRIOR APPLICATION NUMBER: 60/346,523
PRIOR FILING DATE: 2002-01-08
NUMBER: OF SEQ ID NOS: 6
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 1905
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LCCATION: (182)...(1135)
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LENGTH: 1905
TYPE: DNA
ORGANISM: Human
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APPLICANT: Chouinard, Roland
APPLICANT: Chouinard, Roland
APPLICANT: Sayed, Abu
TITLE OF INVENTION: A METHOD OF TREATING OBESITY AND METABOLIC DISORDERS RELEATED
TITLE OF INVENTION: ADIPOSE TISSUE BY ADMINISTRATION OF SFRP-5 PEPTIDE
FILE REFERENCE: 69014-B
CURRENT APPLICATION NUMBER: US/10/768,566
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application No. US200 GENERAL INFORMATION:
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Publication No. US20030023061A1
GENERAL INFORMATION:
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #
CURRENT APPLICATION NUMBER: US/10/146,474
FILING DATE: 14-May-2002
CLASSIFICATION : UNKNOWN>
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/937,067
FILING DATE: <Unknown>
APPLICATION INFORMATION:
NAME: Lehnhardt, Susan K.
REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20018.00
                                                                                                                                                                                                                                                                                                                                                                                   Melkonyan, Hovsep
TITLE OF INVENTION: A FAMILY OF GENES ENCODING
APOPTOSIS-RELATED PEPTIDES;
METHODS OF USE THEREOF
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CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
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STATE: CA
COUNTRY: USA
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                                                                                                                                                                                Version #1.30
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Best Local Similarity:
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INFORMATION FOR SEQ ID NO: 5:
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TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
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TELEPHONE: (650) 813-5600
TELEFAX: (650) 494-0792
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LOCATION:
               IleGlyAlaGlnLysLysLysLysLeuLeuLysProGlyProLeuLysArgLysAspThr
                                                  GACTTTGTGGTCAAAATGCGCATCAAGGAGATCAAGATAGAGAATGGGGACCGGAAGCTG
                                                                  AspPheValValLysMetArgIleLysGluIleLysIleGluAsnGlyAspArgLysLeu
                                                                                                        TGCGCCCAGTGTGAGATGGAGCACAGTGCTGACGGCCTCATGGAGCAGATGTGCTCCAGT
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Percent Similarity:
Best Local Similarity:
Query Match:
                                                                           Pred. No.:
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US-10-301-764-5
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                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/937,067
FILING DATE: <UDACHOWN
ATTORNEY/AGENT INFORMATION:
NAME: Lehnhardt, Susan K.
REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20018.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 813-5600
TELEPHONE: (650) 494-0792
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/10301764 Publication No. US20040039184A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-POS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/10/301,764
FILING DATE: 20-No. US20040039184A1-2002
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tion No. ...
AL INFORMATION:
APPLICANT: Umansky, Samuil
Melkonyan, Hovsep
TITLE OF INVENTION: A PANILY OF GENES ENCODING
APOPTOSIS-RELATED PEPTIDES;
METHODS OF USE THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1056
                                                                                                                                                   SEQUENCE DESCRIPTION: SEQ
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CORRESPONDENCE ADDRESS:
ADDRESSEE: WORRISON & FOERSTER
STREET: 755 Page Mill Road
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LOCATION:
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                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
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STATE: CA
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RESULT 6
US-10-338-604-6
; Sequence 6, Application US/10338604
; Publication No. US20030143610A1
; GENERAL INFORMATION:
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                                                                           TyrProCysSerLeuTyrTyrProPhePheTyrGlyAlaAlaGluProHis 317
                                                                                                                                                                                            LysArgLeuValLeuHisMetLysAsnGlyAlaGlyCysProCysProGlnLeuAspSer
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TITLE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC
TITLE OF INVENTION: DISORDERS, INCLUDING OBESITY AND DIABETES
FILE REFERENCE: MPIO1-250PIRM
CURRENT APPLICATION NUMBER: US/10/338,604
CURRENT APPLICATION NUMBER: US/10/338,604
PRIOR APPLICATION NUMBER: 60/346,523
PRIOR FILING DATE: 2003-01-08
PRIOR FILING DATE: 2002-01-08
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6
LENGTH: 945
TYPE: DNA
ORGANISM: Mus musculus
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             LysLysLeuLeuLysProGlyProLeuLysArgLysAspThrLysArgLeuValLeuHis
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SEQ ID NO 4
LENGTH: 1186
TYPE: DNA
ORGANISM: Mus musculus
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Publication No. US20030143610A1
GENERAL INFORMATION:
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CURRENT FILING DATE: 2003-01-08
PRIOR APPLICATION NUMBER: 60/346,523
PRIOR FILING DATE: 2002-01-08
NUMBER OF SEQ ID NOS: 6
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TITLE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC
TITLE OF INVENTION: DISORDERS, INCLUDING OBESITY AND DIABETES
FILE REFERENCE: MEMORE: 110/1718 604
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NAME/KEY: CDS
LOCATION: (242
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US-10-146-474-18
; Sequence 18, Application US/10-105
; Publication No. US20030023061A1
; Publication No. US20030023061A1
; GENERAL INFORMATION:
 APPLICANT: Umansky, Samuil
; Melkonyan, Hovsep;
TITLE OF INVENTION: A FAMILY OF GENES ENCODING APOPTOSIS-RELATED PEPTIDES; PEPTIDE
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-OOS
SOFTWARE: PATENTIA Release #1.0, Ver
APPLICATION UNMBER: US/10/146,474
FILING DATE: 14-May-2002
CLASSIFICATION DATA:
APPLICATION DATA:
A
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CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISCON & FOERSTER
STREET: 755 Page Mill Road
CITY: Palo Alto
STATE: CA
COUNTRY: USA
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AND

NAME: Lehnhardt, Susan REGISTRATION NUMBER: 33

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US-10-146-474-18
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 813-5600
TELEPAX: (650) 494-0792
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
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              AsnGlyAspArgLysLeuIleGlyAlaGlnLysLysLysLysLysLeuLeuLysProGlyPro
                                                                                                                                        ProProValThrLysIleCysAlaGlnCysGluMetGluHisSerAlaAspGlyLeuMet 194
                                                                                                                                                                                                                                                                                                        CysLeuAspArgProIleTyrProCysArgSerLeuCysGluAlaValArgAlaGlyCys
                                                                                                                                                                                                                                                                                                                                               LeuLeuGluHisGluSerLeuAlaGluValLysGlnGlnAlaSerSerTrpLeuProLeu
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TYPE: nucleic acid
STRANDEDNESS: single
AATGGCGACAAGAAGATTGTC------CCCAAGAAGAAGAAGCCCCTGAAGTTGGGGCCC
                                                     GluGlnMetCysSerSerAspPheValValLysMetArgIleLysGluIleLysIleGlu
                                                                                                                                                                                                                                                                                        TGCCTGGACCGGCCCATCTACCCGTGTCGCTGGCTCTGCGAGGCCGTGCGCGACTCGTGC
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TYPE: DNA (genomic)
DESCRIPTION: SEQ ID
                                                                                                                                                                       -GAGGGGGACGTCTGCATCGCCATGACGCCGCCCAATCCCACCGAAGCCTCCAAG
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Matches:
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Indels:
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Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                           SEQUENCE DESCRIPTION: SEQ ID US-10-301-764-18
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US-10-301-764-18
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US-10-768-566-1 (1-317) x US-10-301-764-18 (1-1308)
                                                                                               Score:
                                                                                                                Alignment Scores: Pred. No.:
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Publication No. US20040039184A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 18:
                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/937,067
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Lehnhardt, Susan K.
REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20018.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 813-5600
TELEPHONE: (650) 813-5600
                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 1308 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Melkonyan, Hovsep
TITLE OF INVENTION: A FAMILY OF GENES ENCODING
APOPTOSIS-RELATED PEPTIDES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
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                                                             Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/10/301,764
FILING DATE: 20-No. US20040039184A1-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Palo Alto
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                                  1.44e-104
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                                                                                                                                                                               NO: 18
                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
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AND

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US-10-138-434A-1
  Sequence 1, Application US/10138434A
Publication No. US20030175864A1
GENERAL INFORMATION:
APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES APPLICANT: Rubin, Jeffrey S.
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CURRENT APPLICATION NUMBER: US/10/138,434A
CURRENT FILING DATE: 2002-05-03
FRIOR APPLICATION NUMBER: US 09/087,031
PRIOR FILING DATE: 1998-05-29
PRIOR APPLICATION NUMBER: US 60/050,495
PRIOR PILING DATE: 1997-06-23
PRIOR PILING DATE: 1997-06-23
PRIOR PILING DATE: 1997-05-29
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 1
LENGTH: 2078
TYPE: DNA
ORGANIGM: Homo Bapiens
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APPLICANT: He, Xi
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING HUMAN FRP AND FRAGMENTS THEREOF
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                                                               CCCCAAGGCACAACGGTGTGTCCTCCCTGTGACAACGAGTTGAAATCTGAGGCCATCATT
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APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: MOVEL METHODS OF DIAGNOS
TITLE OF INVENTION: METHODS OF SCREENING FO
FILE REFERENCE: file
CURRENT APPLICATION NUMBER: US/10/756,149
CURRENT FILING DATE: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
SOFTWARE: PatentIn version 3.2
SEQ ID NO 3306
LENGTH: 2094
TYPE: DNA
ORGANISH: Homo Sapiens
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US-10-756-149-3306
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APPLICANT: Bodine, Peter
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                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/666,851
CURRENT FILING DATE: 2003-09-19
PRIOR APPLICATION NUMBER: US 10/169,545
PRIOR FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: US 60/412,379
PRIOR FILING DATE: 2002-09-19
PRIOR FILING DATE: 2002-09-19
NUMBER OF SEQ ID NOS: 30
                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS AND METHODS USING SECRETED FRIZZLED TITLE OF INVENTION: PROTEIN FILE REFERENCE: 00630/100M091-US1
                                                                                                                                                                                                                                           SOFTWARE: PatentIn version 3.1
                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo
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FRAGMENTS THEREOF

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RESULT 13
US-10-138-434A-27
; Sequence 27, Application US/10138434A
; Publication No. US20030175864A1
; GENERAL INFORMATION:
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Best Local Similarity:
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TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING HUI
FILE REFERENCE: 4239-62520
CURRENT APPLICATION UMBER: US/10/138,434A
CURRENT FILING DATE: 2002-05-03
PRIOR APPLICATION NUMBER: US 09/087,031
PRIOR FILING DATE: 1998-05-29
PRIOR PILING DATE: 1998-05-29
PRIOR FILING DATE: 1997-06-23
PRIOR APPLICATION NUMBER: US 60/050,417
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US-10-425-586-2
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CURRENT FILING DATE: 2003-04-28
PRIOR APPLICATION NUMBER: US/99/546,043
PRIOR FILING DATE: 2000-04-10
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/10425586
Publication No. US20030187223A1
GENERAL INFORMATION:
APPLICANT: Rubin, Jeffery et al.,
TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN, SFRP, FRAGMENTS AND
TITLE OF INVENTION: METHODS OF USE THEREOF
FILE REFERENCE: 53990
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                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/10466136
Publication No. US20040077828A1
GENERAL INFORMATION:
APPLICANT: Rubin, Jeffery et al.,
TITLE OF INVENTION: SFRP AND PEPTIDE MOTIFS:
TITLE OF INVENTION: METHODS OF THEIR USE
FILE REFERENCE: 4.339-61994
                                                                                                                                                                                       SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 942
                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/466,136
CURRENT FILING DATE: 2003-07-10
PRIOR APPLICATION NUMBER: US 60/260,908
                                                                                                                                                                                                                                                PRIOR FILING DATE: 2001-01-10
NUMBER OF SEQ ID NOS: 40
                                                                                                                                    ORGANISM: Artificial Sequence FEATURE:
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                                                                                                                                                                                                                                                                                                                                                          GlyPheProTrpProGluMetLeuHisCysHisLysPheProLeuAspAsnAspLeuCys
                                                                                                                                                                                                                                                                                                                                                                                                                                               AspThrGlnValPheLeuCysSerLeuPheAlaProValCysLeuAspArgProIleTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaGluValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCysHisSer
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arg-----CysGluGluTyrAspTyrTyrGlyTrpGlnAlaGlu------ProLeuHis
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                                                                                               AlaGlySerPheLeuValMetGlyArgLysValAspGlyGlnLeuLeuLeuMetAlaVal
                                                                                                                              GlyAlaGlnLysLysLysLysLeuLeuLysProGlyProLeuLysArgLysAspThrLys
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 GAGTGCCCCACCTTTCAGTCCGTGTTT
                    ProCysSerLeuTyrTyrProPhePhe
                                                                                    AGCCACCACTTCCTCATCATGGGCCGCAAGGTGAAGAGCCAGTACTTGCTGACGGCCATC
                                                                                                                                                                                                                 TTTGCACTGAGGATGAAAATAAAAGAAGTGAAAAAAAATGGCGACAAGAAGATTGTC
                                                                                                                                                                                                                                                          CCTCCCTGTGACAACGAGTTGAAATCTGAGGCCATCATTGAACATCTCTGTGCCAGCGAG
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                                           CACAAGTGGGACAAGAAAACAAGGAGTTCAAAAACTTCATGAAGAAAATGAAAAACCAT
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Mismatches:
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Search

completed: March

23, 2006, 07:20:54

Job time : 915 secs

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Result
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-Q=-Pabss/ABSSWEB spool/US10768566/runat_22032006_155815_25429/app_query.fasta_1
-DBs-Published Applications NA_New -CPMT=fastap -SUFFIX=p2n.rupbn -MINMATCH=0.I
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DCCALICN=200 -THR SCORE=pct -THR MAX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=200000000 -HOST=abss04
-USER=US10768566 @CGN_1 1_431 @runat_22032006_155815_25429 -NCPU=6 -ICPU=3
-NO_MMAP -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -DEV_TIMEOUT=120
-MARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPDXT=0.5 -FGAPOP=6 -FGAPEXT=7
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1: /cgn2_6/ptodata/1/pubpna/USO8_NEW_PUB.seq:*

2: /cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*

5: /cgn2_6/ptodata/1/pubpna/USO9_NEW_PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/USO9_NEW_PUB.seq:*

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8: /cgn2_6/ptodata/1/pubpna/USO1_NEW_PUB.seq1:*

9: /cgn2_6/ptodata/1/pubpna/USO1_NEW_PUB.seq2:*

10: /cgn2_6/ptodata/1/pubpna/USO1_NEW_PUB.seq3:*

11: /cgn2_6/ptodata/1/pubpna/USO1_NEW_PUB.seq3:*

12: /cgn2_6/ptodata/1/pubpna/USO0_NEW_PUB.seq3:*

13: /cgn2_6/ptodata/1/pubpna/USO0_NEW_PUB.seq3:*
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Delop 6.0 , I
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Match
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US-10-821-234-137
US-11-245-147-197
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RESULT 1 US-11-245-147-203

Sequence 203, Application US/11245147 Publication No. US20060030541A1

BARON, ROLAND CALL, KATHERINE ROMAN ROMAN, SERGIO TERESA

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APPLICANT: THEILHABER, JOACHIM
APPLICANT: CONNOLLY, TIMOTHY
APPLICANT: CONNOLLY, TIMOTHY
APPLICANT: CONNOLLY, TIMOTHY
APPLICANT: BUSHNELL, STEVEN
APPLICANT: BUSHNELL, STEVEN
APPLICANT: RAWADI, GEORGES
TITLE OF INVENTION: GENES INVOLVED IN OSTEOGENESIS, AND METHODS OF USE
FILE REFERENCE: 37991-0023
CURRENT FILING DATE: 2005-10-07
PRIOR APPLICATION NUMBER: CT/1102/02211
PRIOR APPLICATION NUMBER: FCT/1802/02211
PRIOR FILING DATE: 2002-04-05
PRIOR FILING DATE: 2002-04-05
PRIOR FILING DATE: 2001-04-05
NUMBER OF SEQ ID NOS: 246
COLUMN OF SEC ID NOS: 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; GENERAL INFORMATION:
APPLICANT: GARCIA, T.
APPLICANT: ROWAN RO)
APPLICANT: BARON, R.
APPLICANT: CALL, KA
APPLICANT: THEILHAB
APPLICANT: CONNOLLY
                                                                                   SOFTWARE: PatentIn Ver. SEQ ID NO 203
ORGANISM: Homo sapiens
                             LENGTH: 4469
TYPE: DNA
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OTHER INFORMATION:
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ATCATTGAACATCTCTGTGCCAGCGAGTTTGCACTGAGGATGAAAATAAAAGAAGTGAAA
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AspGlyGlnLeuLeuMetAlaValTyrArgTrpAspLysAsnLysGluMetLys
                                                        CysProCysProGlnLeuAspSerLeuAlaGlySerPheLeuValMetGlyArgLysVal
                                                                                            GGGCCCATCAAGAAGAAGGACCTGAAGAAGCTTGTGCTGTACCTGAAGAATGGGGCTGAC
                                                                                                          GlyProLeuLysArgLysAspThrLysArgLeuValLeuHisMetLysAsnGlyAlaGly 252
                                                                                                                                               AAAGAAAATGGCGACAAGAAGATTGTC-----CCCAAGAAGAAGAAGCCCCCTGAAGTTG
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                                         TGTCCCTGCCACCAGCTGGACAACCTCAGCCACCACTTCCTCATCATGGGCCGCAAGGTG
                                                                                                                                                                                                                                                                                                           AAGTTCCCG---GAGGGGGACGTCTGCATCGCCATGACGCCGCCCAATGCCACCGAAGCC
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Percent Similarity:
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Query Match:
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; ORGANISM: Homo
US-10-821-234-137
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US-10-821-234-137/c
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APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis
FILE REFERENCE: 821A
CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-07-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Labat, Ivan
APPLICANT: Stache-Crain,
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                                                             TCGTGCGAGCCGGTCATGCAGTTCTTCGGCTTCTACTGGCCCGAGATGCTTAAGTGTGAC
                                                                                              GlyCysAlaProLeuMetGluAlaTyrGlyPheProTrpProGluMetLeuHisCysHis 153
                                                                                                                                                               ProValCysLeuAspArgProIleTyrProCysArgSerLeuCysGluAlaValArgAla 133
                                                                                                                                                                                                                    ProLeuLeuAlaLysArgCysHisSerAspThrGlnValPheLeuCysSerLeuPheAla 113
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RESULT 3
US-11-245-147-197
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                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                 ; OTHER INFORMATION: Homo sapiens secreted frizzled-related protein ; OTHER INFORMATION: (SFRP2), mRNA.
US-11-245-147-197
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                  US-10-768-566-1
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SEQ ID NO 197
LENGTH: 1382
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APPLICANT:
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APPLICANT: RAWADI, GENGRGES
TITLE OF INVENTION: GENERGE INVOLVED IN OSTEOGENESIS, AND METHODS OF
FILE REFERENCE: 37991-0023
CURRENT APPLICATION NUMBER: US/11/245,147
CURRENT FILING DATE: 2005-10-07
PRIOR APPLICATION NUMBER: PCT/IB02/02211
PRIOR PILING DATE: 2002-04-05
PRIOR PILING DATE: 2002-04-05
PRIOR APPLICATION NUMBER: 60/281,400
PRIOR PILING DATE: 2001-04-05
NUMBER OF SEQ ID NOS: 246
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                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                     FEATURE:
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                  (1-317)
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RESULT 4
US-09-925-065A-678403
; Sequence 678403, Application US/09925065A
; Publication No. US20040181048A1
; GENERAL INFORMATION:
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                                                                                                                                                                  GTGCACCTGTGAGGAGATGAACGACATCAACGCGCCCTATCTGGTCATGGGACAGAAACA
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APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT PILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR FILING DATE: 2000-10-24
PRIOR FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/269,846
PRIOR APPLICATION NUMBER: US 60/289,846
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Query Match:
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; ORGANISM: Homo sapiens
US-09-925-065A-678403
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 678403
LENGTH: 2379
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CCACAGTGGTCAAAATGCGCATCAAGGAGATCAAGATAGAGAATGGGGACCGGAAGCTGA
                                pPhe-ValValLysMetArgIleLysGluIleLysIleGluAsnGlyAspArgLysLeuI
                                                                                                                sAlaGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSerAs
                                                                                                                                                                                              uCysIleAlaValGlnPheGlyHisLeuProAlaThrAlaProProValThrLysIleCy
                                                                                                                                                                                                                                                                          aTyrGlyPheProTrpProGluMetLeuHisCysHisLysPheProLeuAspAsnAspLe
                                                                                                                                                                                                                                                                                                                                                        gSerLeuCysGluAlaValArgAlaGly------CysAlaProLeuMetGluAl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G-----CTCAGAAGGGCTTGGACTCTCGATTCACGCAGGTCAC
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                                                                             TGTGCCCACCAGCATCCCACACAGATCTGÁCCATTCCCAACTTGCCCCTGTCCTTTCTTC
                                                                                                                                                                                                                                                                                                                     TTGAGAGTGCAGCATGATAAGTGCTTCATAAATATGAAAATGTGCC
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621.50
57.0%
51.3%
35.9%
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Matches:
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Indels:
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PRIOR APPLICATION NUMBER: PCT/IB02/02211
PRIOR FILING DATE: 2002-04-05
PRIOR APPLICATION UMBER: 60/281,400
PRIOR FILING DATE: 2001-04-05
NUMBER OF SEQ ID NOS: 246
SOFTWARE: Patentin Ver. 3.2
SEQ ID NO 5
SEQ ID NO 5
LENGTH: 926
TYPE: DNA
ORGANISM: MUS MUSCULUS
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Query Match:
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APPLICANT: GARCIA, TERESA
APPLICANT: ROMAN ROMAN, S
APPLICANT: BARON, ROLAND
APPLICANT: CALL, KATHERIN
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                                                                                                                                                                                                                                                                                     Percent Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: THEILHABER, JOACHIM
APPLICANT: CONNOLLY, TIMOTHY
APPLICANT: JACKSON, AMANDA
APPLICANT: JACKSON, AMANDA
APPLICANT: BUSHNELL, STEVEN
APPLICANT: RAWADI, GEORGES
TITLE OF INVENTION: GENES INVOLVED IN OSTEOGENESIS, AND METHODS
FILE REFERENCE: 37991-0023
CURRENT APPLICATION NUMBER: US/11/245,147
CURRENT FILING DATE: 2005-10-07
                                                                                                                                                                                                                                                                                                                      No.:
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                   CysLeuAspIleProAlaAspLeuProLeuCysHisThrValGlyTyrLysArgMetArg
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                                                                                                                                 GCCTCGCTGCTGCTAGTCCTCGCCTCGCACCGCTGCCTGGGCTCGGCGCGTGGGCTC
                                                                                                                                                                 AlaAlaLeuAlaLeuLeuGlyAlaLeuHisTrpAlaProAlaArgCysGluGluTyr 32
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ATCCCCGCCAACCTGCAGCTGTGCCACGGCATCGAGTACCAGAACGTGCGG
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615.50
61.8%
43.8%
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Matches:
Conservative:
Mismatches:
Indels:
Gaps:
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Sequence 80, Application US/11245147

Sequence 80, Application US/11245147

Publication No. US20060030541A1

GENERAL INFORMATION:

APPLICANT: GARCIA, TERESA

APPLICANT: GARCIA, TERESA

APPLICANT: CALL, KATHERINE

APPLICANT: CALL, KATHERINE

APPLICANT: CONNOLLY, TIMOTHY

APPLICANT: JACKSON, AMANDA

APPLICANT: BUSHNELL, STEVEN

APPLICANT: BUSHNELL

APPLICANT: BUSHNELL, STEVEN

APPLICANT: BUSHNELL

APPLICANT: BUSHNE
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US-11-245-147-80
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        RESULT 7
US-11-004-762-19
; Sequence 19, Application US/11004762
; Publication No. US20060003953A1
; GENERAL INFORMATION:
; APPLICANT: C. Frank Bennett
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Query Match:
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CURRENT FILING DATE: 2004-12-03
PRIOR APPLICATION NUMBER: US 60/527,370
PRIOR FILING DATE: 2003-12-04
PRIOR APPLICATION NUMBER: US 60/527,173
PRIOR APPLICATION NUMBER: US 60/527,173
PRIOR APPLICATION NUMBER: US 60/527,172
PRIOR APPLICATION NUMBER: US 60/527,172
PRIOR APPLICATION NUMBER: US 60/527,172
PRIOR APPLICATION NUMBER: US 60/527,420
PRIOR APPLICATION NUMBER: US 60/527,174
PRIOR APPLICATION NUMBER: US 60/527,397
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APPLICANT: Kathleen Myers
TITLE OF INVENTION: Compositions and their uses directed to bone growth modulators
FILE REFERENCE: BIOL0050US
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                                  ArgLysValAspGlyGlnLeuLeuLeuMetAlaValTyrArgTrpAspLysLysAsnLys
                                                                          GGCGCCGACTGTCCCTGCCACCAGCTGGACAACCTCAGCCACAACTTCCTCATCATGGGG
                                                                                              GlyAlaGlyCysProCysProGlnLeuAspSerLeuAlaGlySerPheLeuValMetGly
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CGCAAGGTGAAGAGCCAGTACTTGCTCACAGCCATTCACAAGTGGGACAAGAAAAAACAAG
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Nicholas M. Dean
Kenneth W. Dobie
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Best Local Similarity:
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CURRENT FILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR FILING DATE: 2000-10-24
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR PILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR PILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-05-09
NUMBER: OF SEQ ID NOS: 957086
PRIOR FILING DATE: 2001-05-09
NUMBER: OF SEQ ID NOS: 957086
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LENGTH: 631
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TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Hume
FILE REFERENCE: 108827.135
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CysAlaGlnCysGluMetGluHisSerAlaAspGlyLeuMetGluGlnMetCysSerSer
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Publication No. US20060046257A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Compugen Ltd
TITLE OF INVENTION: NOVEL NUCLEOTIDE AND AMINO ACID SEQUENCES, AND ASSAYS AND METHODS
TITLE OF INVENTION: THEREOF FOR DIAGNOSIS OF LUNG CANCER
FILE REFERENCE: 1847.1002
CURRENT EPLICATION NUMBER: US/11/051,720
CURRENT FILING DATE: 2005-01-27
NUMBER OF SEQ ID NOS: 1780
SEQ ID NO 28
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US-11-184-005-23
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SEQ ID NO 23
LENGTH: 1291
TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 10/028051
PRIOR FILING DATE: 2001-12-19
PRIOR APPLICATION NUMBER: US 08/822333
PRIOR FILING DATE: 1997-03-20
PRIOR PILING DATE: 1997-03-20
PRIOR PILING DATE: 1996-10-11
PRIOR FILING DATE: 1996-10-11
NUMBER OF SEQ ID NOS: 23
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APPLICANT: Wang, Shouwen
TITLE OF INVENTION: METHOD OF MODULATING TISSUE
TITLE OF INVENTION: GROWTH USING FRZB PROTEIN
FILE REFERENCE: NIH133.1CPC3
CURRENT APPLICATION UNDERS: US/11/184,005
CURRENT FILING DATE: 2005-07-18
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AlaLysArgCysHisSerAspThrGlnValPheLeuCysSerLeuPheAlaProValCys 116
                                                                                          LeuGluHisGluSerLeuAlaGluValLysGlnGlnAlaSerSerTrpLeuProLeuLeu 96
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RESULT 11
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APPLICANT: Wang, Shouwen
TITLE OF INVENTION: METHOD OF MODULATING TISSUE
TITLE OF INVENTION: METHOD OF MODULATING TISSUE
TITLE OF INVENTION: GROWTH USING FRZB PROTEIN
FILE REFERENCE: NIH133.1CPC3
CURRENT APPLICATION NUMBER: US/11/184,005
CURRENT FILING DATE: 2005-07-18
PRIOR APPLICATION NUMBER: US 10/028051
PRIOR FILING DATE: 2001-12-19
PRIOR FILING DATE: 2001-12-19
PRIOR APPLICATION NUMBER: US 08/822333
PRIOR APPLICATION NUMBER: US 08/729,452
PRIOR APPLICATION NUMBER: US 08/729,452
PRIOR FILING DATE: 1996-10-11
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                NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 2374
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                          APPLICANT: Luyten, Frank P. APPLICANT: Moos, Malcolm JR.
 ORGANISM: Bos taurus
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                                     T---AACGTTAATGAGGAGTATCTCATCATGGGCTACGAAGATGAAGAGCGCTCCAGATT
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----ValAspGlyGlnLeu---
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PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/318,410
PRIOR FILING DATE: 2001-09-10
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR FILING DATE: 7001-09-10
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Query Match:
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US-11-054-281-35
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SEQ ID NO 35
LENGTH: 2184
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PRIOR APPLICATION NUMBER: 60/261,029
PRIOR FILING DATE: 2001-01-11
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PRIOR APPLICATION NUMBER: 60/261,014
PRIOR FILING DATE: 2001-01-11
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TITLE OF INVENTION: Proteins and Nucleic Acids
FILE REFERENCE: 21402-240CIP
CURRENT APPLICATION NUMBER: US/11/054,281
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NUMBER OF SEQ ID NOS: 324
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PRIOR APPLICATION NUMBER: 60/261,026
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                                                             GCGGCTGCCGAGCTAGCGGAGTTCGCGCCGCCGCTGGTGCAGTACGGCTGCCACAGCCACCTG
                                                                                                                                           GGCATCGGCTACAACCTGACCCGCATGCCCAACCTGCTGGGCCACACGTCGCAGGGCGAG
                                                                                                                                                                                                                       CGCGGG---GCTGCGCCGTGCCAGGCGGTGGAGATC-----
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                                                                                                  ValLysGlnGlnAlaSerSerTrpLeuProLeuLeuAlaLysArgCysHisSerAspThr
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vo. US20060013813A1
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CURRENT APPLICATION NUMBER: US/11/184,005
CURRENT FILING DATE: 2005-07-18
PRIOR APPLICATION NUMBER: US 10/028051
PRIOR FILING DATE: 2001-12-19
PRIOR FILING DATE: 2001-12-19
PRIOR FILING DATE: 1997-03-20
PRIOR FILING DATE: 1997-03-20
PRIOR APPLICATION NUMBER: US 08/822333
PRIOR FILING DATE: 1997-03-20
PRIOR PILING DATE: 1996-10-11
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0
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Best Local Similarity:
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ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 1484
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      101 sSerAspThrGlnValPheLeuCysSerLeuPheAlaProValCysLeu---
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                                           TCAGGCCAACGCCATCCTGGCCATCGAGCAGTTCGAAGGTCTGCTGGGCACCCCACTGCAG
                                                                                                                        CCTGTGCAAGTCCCTGCCCTGGAACATGACTAAGATGCCCAACCACCTGCACCACAGCAC
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RESULT 14
US-11-127-877-26
; Sequence 26, Application US/11127877
; Publication No. US20050287565A1
; GENERAL INFORMATION:
; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-127-877-26
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                                                            NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn ver
SEQ ID NO 26
LENGTH: 2561
                                                                                                                                                                                                                             APPLICANT: Spittaels, Koenraad F. F.
APPLICANT: Laenen, Wendy
TITLE OF INVENTION: Methods, Compositions and Compound Assays For Inhibiting
TITLE OF INVENTION: Amyloid-Beta Protein Production
FILE REFERENCE: P27,800-B USA
CURRENT APPLICATION NUMBER: US/11/127,877
CURRENT FILING DATE: 2005-55-12
                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/570,352
PRIOR FILING DATE: 2004-05-12
PRIOR APPLICATION NUMBER: 60/603,948
                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Merchiers, Pascal G. APPLICANT: Hoffmann, Marcel
                                                                                                                                                   PRIOR FILING DATE: 2004-08-24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 154, Application US/11067231 Publication No. US20050272063A1 GENERAL INFORMATION:
                                    SOFTWARE: PatentIn Ver. SEQ ID NO 154
                                                                                                                                                                                                                                                APPLICANT: Katagiri, Toyomasa
APPLICANT: Fukukawa, Chikako
TITLE OF INVENTION: METHOD FOR TREATING SYNOVIAL SARCOMA
FILE REFERENCE: 1254-0272PUS1
CURRENT APPLICATION NUMBER: US/11/067,231
CURRENT FILING DATE: 2005-02-28
PRIOR APPLICATION NUMBER: US 60/407,506
PRIOR APPLICATION NUMBER: US 60/486,195
PRIOR APPLICATION NUMBER: US 60/486,195
                                                                                                                     PRIOR FILING DATE: 2003-07-11
PRIOR APPLICATION NUMBER: PCT/JP03/10591
PRIOR FILING DATE: 2003-08-21
PRIOR APPLICATION NUMBER: PCT/JP2004/002144
PRIOR FILING DATE: 2004-02-24
PRIOR APPLICATION NUMBER: US 60/598,834
                                                                                PRIOR FILING DATE: 2004-08-05
NUMBER OF SEQ ID NOS: 218
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TYPE: DNA
                 LENGTH: 2811
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; ORGANISM: Homo sapiens
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US-11-067-231-154
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Search completed: March 23, 2006, 08:26:16 Job time : 395 secs
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                                                 241 LysArgLeuVal------LeuHisMetLysAsnGly 250
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626 GAGCGCGTCGTGCGCGCCGCTCTGCACGCCCGGCGTGGA 664
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Perfect score:
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        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  1730
1730
1674.5
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ALIGNMENTS

RESULT 1 US-08-937-067-6

Sequence 6, Application US/08937067 Patent No. 6433155

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TELEFAX: (650) 494-0792;
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 317 amino acids
TYPE: amino acid
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-937-067-6
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Matches 317
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: PATENTIN Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/937,067
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GENERAL INFORMATION:
APPLICANT: Umansky, Samuil
APPLICANT: Wilkonyan, Howeep
TITLE OF INVENTION: A FAMILY OF GENES ENCODING
TITLE OF INVENTION: APOPTOSIS-RELATED PEPTIDES; PEPTIDES ENCODED THEREBY AND
TITLE OF INVENTION: METHODS OF USE THEREOF
NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                            FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
ANAME: Lehnhardt, Susan K.
REGISTRATION UNMBER: 33,943
REFERENCE/DOCKET NUMBER: 2364
TELECOMMUNICATION INFORMATION:
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ADDRESSEE: MORRISON & FOER
STREET: 755 Page Mill Road
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CITY: Palo Alto
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GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSITILES OF INVENTION: WITH HUMAN DISEASE, METHODS OF FILE REFERENCE: CLOO1307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FRST SEQ ID NOS: 207012

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Best Local S
Matches 317
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o. 6812339
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                                                                                                          CAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDT
                                                                                                                         CAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDT
                                                                                                                                                               IYPCRSLCEAVRAGCAPLMEAYGPPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKI
                                                                                                                                                                                IYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKI
                                                                                                                                                                                                                    PLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRP
                                                                                                                                                                                                                                   PLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRP
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; Sequence 7, Application US/08937067
; Patent No. 6433155
; GENERAL INFORMATION:
APPLICANT: Umansky, Samuil
; APPLICANT: Umansky, Samuil
; APPLICANT: Melkonyan, Hovsep
; TITLE OF INVENTION: A POPTOSIS-RELATED PEPTIDES; PEI
; TITLE OF INVENTION: METHODS OF USE THEREOF
; TITLE OF INVENTION: METHODS OF USE THEREOF
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
STREET: 755 Page Mill Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FRASSEQ for Windows Version 4.0
SEQ ID NO 7706
LEGGTH: 305
TYPE: PRT
ORGANISM: Human
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US-09-949-016-7706
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Patent No. 6812339
GENERRAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES
FILE REFERENCE: CL001307
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CITY: Palo Alto
STATE: CA
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CURRENT APPLICATION NUMBER: US/09/546,043
CURRENT FILING DATE: 2000-04-10
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 3
LENGTH: 313
TYPE: PRT
ORGANISM: Homo sapiens
US-09-546-043-3
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US-09-546-043-3
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NAME: Lebnhardt, Susan K.
REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20018.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 813-5600
TELEPAX: (650) 843-6702
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
     S
                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Rubin, Jeffery et al.,
TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN,
TITLE OF INVENTION: METHODS OF USE THEREOF
FILE REFERENCE: 53990
                                                                                                                                                                                                                                                                       Sequence 3, Application US/09546043 Patent No. 6600018
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Matches 179;
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/937,067
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLDRPIYPCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCIAMTPPNPTEASK 179
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                                                                                                                                                                                                                                                                                                                                                                                        MKKMKNHECPTFQSVF 313
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-546-043-4
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US-09-546-043-4
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SEQ ID NO 4
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                                                                                                                                                                                                                                                                                                                                                           Query Match 53.0%;
Best Local Similarity 57.9%;
Matches 179; Conservative 5
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CURRENT FILING DATE: 2000-04-10
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Rubin, Jeffery et al., TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN, SFRP, FRAGMENTS AND TITLE OF INVENTION: METHODS OF USE THEREOF FILE REFERENCE: 53990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
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                                                      RLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFSY 301
                                                                                                              AQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTK 241
                                                                                                                                                                                       PCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATAPPVTKIC 181
                                                                                                                                                                                                                                                                                              GRRGAALGVLL-ALGGASGRGLGSEYDYVSFQSDIGPYQSGRFYTKPPQCVDIPADLRL
                                                                                                                                                                                                                                                                                                                  GGVRTAALALLLGALHWAPAR--CEBYDYYGWQAB--PLH-GRSYSKPPQCLDIPADLPL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCRSLCEAVRAGCAPLMEAYGFFWPEMLHCHKFPLDNDLCIAVQFGH-LPATAPPVTKIC
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 PCSLYYPFF 310
                                                                                               PPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGPIKKKDLK
                                                                                                                                                                                                                             CHNVGYKKMVLPNLLEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFAPVCLDRPIY
                                                                                                                                                                                                                                           CHTVGYKRMRLPNILLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIY 122
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                                KLVLYLKNGADCPCHQLDNLSHHFLIMGRKVKSQYLLTAIHKWDKKNKBFKNFMKKMKNH
                                                                                                                                                                PCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCIAMTPPNATEASKPQGTTVC
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                                                                                                                                                                                                                                                                                                                                                             Score 917; DB 2;
Pred. No. 3.2e-98;
0; Mismatches 70
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Pred. No. 2.8e-98;
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                                                                                                                                                                                                                                126
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8

Gaps

179

297 295 237 120 116 60

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CURRENT APPLICATION NUMBER: US/09/514,885;
CURRENT FILING DATE: 2000-02-29
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 313
TYPE: PRT
ORGANISM: Human
US-09-514-885-1
                                                      APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISKS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
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US-09-949-016-6299
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US-09-514-885-1
                                                                                                                                                                                                                                                                                                           Sequence 6299, Application US/09949016 Patent No. 6812339 GENERAL INFORMATION:
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Matches
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GENERAL INFORMATION:
  NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6299
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APPLICANT: Imai, Kazushi
TITLE OF INVENTION: NOVEL THERAPEUTIC TREATMENT OF
TITLE OF INVENTION: PULMONARY DISEASE
FILE REFERENCE: 58483.app
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                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
ELENGTH: 314
TYPE: PRT
ORGANISM: Homo sapiens
US-09-087-031E-3
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                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Rubin, Jeffrey S.
APPLICANT: Finch, Paul
APPLICANT: Finch, Paul
APPLICANT: He, Xi

TITLE OF INVENTION: HUMAN FRP AND FRAGMENTS THEREOF INCLUDING METHODS FOR USING THEM
FILE REFERENCE: 11613.13USI1
CURRENT FILING DATE: 1998-05-29
FRIOR APPLICATION NUMBER: 09/087,031
PRIOR APPLICATION NUMBER: 09/087,031
PRIOR FILING DATE: 1998-05-29
PRIOR APPLICATION NUMBER: 60/080,417
PRIOR APPLICATION NUMBER: 60/050,417
PRIOR FILING DATE: 1997-06-23
NUMBER OF SEQ ID NOS: 27
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Best Local Similarity
Matches 177; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence 3, Application US/09087031E
Patent No. 6479255
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Best Local
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TYPE: PRT
ORGANISM: Human
                         116
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                                                                                                                                                                                                                                                    Similarity
CLDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATA 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QGTTVCPPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGPI
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                                                                 I PADLRLCHNVGYKKMVLPNLLEHETMAEVKGGASSWVPLLNKNCHAGTGVFLCSLFAPV
                                                                                    IPADLP1CHTVGYKRMRLPN1LEHESLABVKQQASSWLP1LAKRCHSDTQVF1CS1FAPV 115
                                                                                                                                                                          MRAAAAAGGVRTAALALL--LGALHWAPARCEEYDY--YGWQAEPL-HGRSYSKPPQCLD
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                                                                                                                                               MGIGRSEGGRRGAALGVLLALGAALLAVGSASEYDYVSFGSDIGPYGSGRFYTKPPGCVD
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                                                                                                                                                                                                                             Score 869.5; DB 2;
Pred. No. 1e-92;
8; Mismatches 86;
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Pred. No. 4.8e-98;
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9,

Gaps

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CURRENT APPLICATION NUMBER: US/09/087,031E
CURRENT FILING DATE: 1998-05-29
PRIOR APPLICATION NUMBER: 09/087,031
PRIOR FILING DATE: 1998-05-29
PRIOR APPLICATION NUMBER: 60/050,417
PRIOR PILING DATE: 1997-06-23
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PATENTIN VERSION 3.1
SEQ ID NO 4
LENGTH: 313
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-087-031E-4
                              US-09-546-043-7
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US-09-087-031E-4
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                                           RESULT 11
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Sequence 7, Application US/09546043 Patent No. 6600018
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Best Local Similarity
Matches 171; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Rubin, Jeffrey
APPLICANT: Finch, Paul
APPLICANT: Aaronson, Stua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: 11613.13USI1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: He, Xi
TITLE OF INVENTION: HUMAN FRP AND FRAGMENTS
                                                                                  298
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                                                                                                                                                                                                                                                                                                                                                                                               tch 49.7%; Score 860; DB 2; al Similarity 54.3%; Pred. No. 1.3e-91; 171; Conservative 48; Mismatches 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238
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                                                                                                                                               KRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAV 295
                                                                                                                                                                                    GGTTVCPPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGPI
                                                                                                                                                                                                  LDRPIYPCRWLCEAVRDSCEPVMGFFGFYWPEMLKCDKFP-EGDVCIAMTPPNATEASKP 179
                                                                                                                                                                                                                                                                                         PADLRLCHNVGYKKMVLPNLLEHETMAEVKGGASSWVPLLNKNCHAGTGVFLCSLFAPVC
                                                                                                                                                                                                                                                                                                                                                                       MRAAAAAGGVRTA-ALALLIGALHWAPARCEBYDY--YGWQABPL-HGRSYSKPPQCLDI
                                                                                                                                                                                                                                                       LDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATAP 175
                                                                                                                                                                                                                                                                                                          PADLPLCHTVGYKRMRLPNILLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVC 116
                                                                                                                                                                                                                                                                                                                                             MGIGRSEGGRRGALGVLLALGAALLAVGSASEYDYVSFGSDIGPYGSGRFYTKPPGCVDI
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                                                                                                          KFMFSYPCSLYYPFF 310
                                                                                                                                   KKKDLKKLVLYLKNGADCPCHGLDNLSHHFLIMGRKVKSGYLLTAIHKWDKKNKEFKNFM 297
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                                                                                  312
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                                                                                                                                                                                                                                                                                                                                                                                                                          Length 313;
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US-09-546-043-6
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SEQ ID NO 6
                                                                                                                                               Matches
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Best Local 9
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TYPE: PRT
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; ORGANISM: Homo sapiens US-09-546-043-6
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CURRENT FILING DATE: 2000-04-10
NUMBER OF SEQ ID NOS: 13
SOPTWARE: Patentin Ver. 2.1
SEQ ID NO 7
LENGTH: 267
TYPE: PAT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 6, Application US/09546043
Patent No. 6600018
                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
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CURRENT FILING DATE: 2000-04-10
NUMBER OF SEQ ID NOS: 13
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TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN, SFRP, FRAGMENTS
TITLE OF INVENTION: METHODS OF USE THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 53990
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TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN, SFRP, FRAGMENTS
TITLE OF INVENTION: METHODS OF USE THEREOF
FILE REFERENCE: 53990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Ver. 2.1
PCRSLCEAVRAGCAPLMEAYGFFWFEMLHCHKFFLDNDLCIAVQFGH-LFATAPFVTKIC
                                                                                                          CHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIY 122
                                                                                                                                                                                                        GGVRTAALALLLGALHWAPAR--CEEYDYYGWQAE--PLH-GRSYSKPPQCLDIPADLPL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTK 241
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                                                                              CHNVGYKKMVLPNLLEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFAPVCLDRPIY
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                                                                                                                                                                                                                                                                                                38.1%; Score 659; DB 2; 57.6%; Pred. No. 2.7e-68;
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US-08-937-067-2
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APPLICANT: Umansk
APPLICANT: Melkon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 536
ATTORNEY AGENT INFORMATION:
ATOMONIE L'ENHANCE, SUBBAN K.
REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 2364
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
STREET: 755 Page Mill Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Melkonyan, Hoveep
TITLE OF INVENTION: A FAMILY OF GENES ENCODING
TITLE OF INVENTION: APOPTOSIS-RELATED PEPTIDES;
TITLE OF INVENTION: METHODS OF USE THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
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237
                            245 LHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMK 292
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                                                                                                MEHSADG-LMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTKRLV 244
                                                                                                                                                                  AVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH--LPAT--APPVTKICAQCE
                                                                                                                                                                                                             LPNLLGHETMKEVLEQAGAMIPLVMKQCHPDTKKFLCSLFAPVCLDDLDETIQPCHSLCV 119
                                                                     TKNEDDNDIMETLCKNDFALKIKVKEITYINRDTKIILETKSKTIYKLNGVSERDLKKSV
                                                                                                                                           QVKDRCAPVMSAFGFPWPDMLECDRFPQDNDLCIPLASSDHLLPATEEAP---KVCEACK 176
                                                                                                                                                                                                                                                   LPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVC---LDRPIYPCRSLCE
                                                                                                                                                                                                                                                                                        ASILLLVLASHCCLGSARGLFLFG-QPDFSYKRTNCKP----IPANLQLCHGIEYQNMR
                                                                                                                                                                                                                                                                                                                          AALALLIGALHWAPARCEEYDYYGWQAEPLHGRSYSKPPQCLDIPADLPLCHTVGYKRMR
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LWLKDSLQCTCEEMNDINAPYLVMGQKQGGELVITSVKRWQKGQREFK 284
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(650) 494-0792
OR SEQ ID NO: 2:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                            35.7%; Score 617.5;
43.8%; Pred. No. 2.46
tive 52; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Release #1.0, Version #1.30
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RESULT 14
US-09-999-833A-415
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CURRENT FILING DATE: 2001-10-24
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-13
PRIOR FILING DATE: 1997-11-13
                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR PPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR PPLICATION NUMBER: 60/077649
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR APPLICATION NUMBER: 60/077791
PRIOR APPLICATION NUMBER: 60/077791
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/078004
PRIOR PILING DATE: 1998-03-13
PRIOR APPLICATION NUMBER: 60/078086
PRIOR APPLICATION NUMBER: 60/078086
PRIOR APPLICATION NUMBER: 60/078086
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PRIOR APPLICATION NUMBER: 60/078886
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GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
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                                   APPLICATION NUMBER: 60/079656
                                                        APPLICATION NUMBER: 6 FILING DATE: 1998-03-
                                                                                                     FILING DATE: 1998-03-20
                                                                                                                           APPLICATION NUMBER:
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APPLICATION NUMBER: 60/078936
                 FILING
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Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
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Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
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Kuo, Sophia S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
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Filvaroff,
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Botstein, David
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f, Ellen
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R FILING DATE: 1998-03R APPLICATION NUMBER: 6
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R FILING DATE: 1998-03R APPLICATION NUMBER: 6

60/079689

NUMBER: 60/079728

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OR APPLICATION NUMBER: 60/08359
OR APPLICATION NUMBER: 60/083509
OR APPLICATION NUMBER: 60/083509
OR APPLICATION NUMBER: 60/083742
OR APPLICATION NUMBER: 60/083742
OR APPLICATION NUMBER: 60/084366
OR FILING DATE: 1998-05-05
OR APPLICATION NUMBER: 60/084414
OR FILING DATE: 1998-05-06
OR APPLICATION NUMBER: 60/084441
OR APPLICATION NUMBER: 60/084441
OR APPLICATION NUMBER: 60/084637
OR APPLICATION NUMBER: 60/084637
OR APPLICATION NUMBER: 60/084639
OR FILING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/084640
OR APPLICATION NUMBER: 60/084640
OR FILING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/084598
OR FILING DATE: 1998-05-07
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OR APPLICATION NUMBER: 60/08
OR APPLICATION NUMBER: 60/08
OR FILLING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/08
OR FILLING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/08
OR FILLING DATE: 1998-05-13
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OR APPLICATION NUMBER: 60/08
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PR FILING DATE: 1998-04-29
DR APPLICATION NUMBER: 60/08
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R APPLICATION NI
R APPLICATION NI
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Conservative
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                                                                                                                                                                                                                                                                                         50;
                                                                                                                                                                                                                                                                                         Score 610.5; DB 2
Pred. No. 1.6e-62;
0; Mismatches 95
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PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION

NUMBER: 60/081203

1998-04-08

FILING DATE:

APPLICATION NUMBER: 60/081049 FILING DATE: 1998-04-08 APPLICATION NUMBER: 60/081071 FILING DATE: 1998-04-08 APPLICATION NUMBER: 60/081195

DR FILING DATE: 1998-04-09
DR PILING DATE: 1998-04-09
DR FILING DATE: 1998-04-09
DR FILING DATE: 1998-04-09
DR PELICATION NUMBER: 60/081955
DR FILING DATE: 1998-04-15
DR APPLICATION NUMBER: 60/081817
DR APPLICATION NUMBER: 60/081819
DR FILING DATE: 1998-04-15
DR APPLICATION NUMBER: 60/081819
DR FILING DATE: 1998-04-15
DR APPLICATION NUMBER: 60/081952
DR APPLICATION NUMBER: 60/081838
DR APPLICATION NUMBER: 60/081838
DR FILING DATE: 1998-04-15
DR FILING DATE: 1998-04-15
DR FILING DATE: 1998-04-15

PRIOR PRIOR

DR FILING DATE: 1998-04-01

DR APPLICATION NUMBER: 60/080333

DR FILING DATE: 1998-04-01

DR APPLICATION NUMBER: 60/080334

DR FILING DATE: 1998-04-01

DR APPLICATION UMBER: 60/081070

DR FILING DATE: 1998-04-08

APPLICATION NUMBER: 60/080194
FILING DATE: 1998-03-31
APPLICATION NUMBER: 60/080327
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080328

APPLICATION NUMBER: 60/080107 FILING DATE: 1998-03-31 APPLICATION NUMBER: 60/080165 FILING DATE: 1998-03-31

PRIOR PRIOR

APPLICATION FILING

NUMBER:

60/079923

DATE:

1998-03-30

FILING DATE: 1998-03-30
APPLICATION NUMBER: 60/080105
FILING DATE: 1998-03-31

FILING DATE: 1998-03-27 APPLICATION NUMBER: 60/079920 FILING DATE: 1998-03-27 APPLICATION NUMBER: 60/079786

PRIOR

DR APPLICATION NUMBER: 60/082568

R FILING DATE: 1998-04-21

DR APPLICATION NUMBER: 60/082569

DR FILING DATE: 1998-04-21

DR APPLICATION NUMBER: 60/082704

DR FILING DATE: 1998-04-22

DR FILING DATE: 1998-04-22

DR APPLICATION NUMBER: 60/082804

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DR APPLICATION NUMBER: 60/082700

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R FILING DATE: 1998-04.
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60/083336

APPLICATION N FILING DATE: APPLICATION N FILING DATE:

NUMBER:

NUMBER: 60/083392

1998-04-28

60/083322

1998-04-29

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TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same

PILE REFERENCE: P2630P1C74

CURRENT APPLICATION NUMBER: US/10/020,445A

CURRENT FILING DATE: 2001-10-24

PRIOR PPLICATION NUMBER: 09/918585

PRIOR FILING DATE: 2001-07-30

PRIOR APPLICATION NUMBER: 60/062250

PRIOR APPLICATION NUMBER: 60/064249

PRIOR FILING DATE: 1997-10-17

PRIOR FILING DATE: 1997-11-31

PRIOR FILING DATE: 1997-11-31

PRIOR APPLICATION NUMBER: 60/06311

PRIOR APPLICATION NUMBER: 60/06311

PRIOR APPLICATION NUMBER: 60/06364

PRIOR APPLICATION NUMBER: 60/077450

PRIOR APPLICATION NUMBER: 60/077450

PRIOR FILING DATE: 1999-01-01

PRIOR PILING DATE: 1999-01-0

PRIOR APPLICATION NUMBER: 60/077450

PRIOR APPLICATION NUMBER: 60/077632
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US-10-020-445A-415
; Sequence 415, Application US/10020445A
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DR FILING DATE: 1998-03-11

DR APPLICATION NUMBER: 60/077791

DR FILING DATE: 1998-03-12

DR APPLICATION NUMBER: 60/078004

DR FILING DATE: 1998-03-13

DR APPLICATION NUMBER: 60/078886

DR FILING DATE: 1998-03-20

DR APPLICATION NUMBER: 60/078936

DR APPLICATION NUMBER: 60/078936

DR FILING DATE: 1998-03-20
                                                                                                                                                                                                            FILING DATE: 1998-03-11
APPLICATION UNMER: 60/077641
FILING DATE: 1998-03-11
APPLICATION NUMBER: 60/077649
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Shelton,
Stewart,
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Gerritsen, Mary E.
Goddard, Audrey
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Gao, Wei-Qiang
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Desnoyers, Luc
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Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
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Baker Kevin P
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lton, David L.
wart, Timothy A.
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APPLICATION NUMBER: 60/084627
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083500
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APPLICATION NUMBER: 60/083559
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APPLICATION NUMBER: 60/083558
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APPLICATION NUMBER: 60/083554
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APPLICATION NUMBER: 60/083545
                                                  al Similarity
125; Conserv
35.3%; Score 610.5; DB 2; llarity 43.6%; Pred. No. 1.6e-62; Conservative 50; Mismatches 95;
                                                                                                                                                     NUMBER: 60/085704
                                                                                                                     NUMBER: 60/085697
                                                                                                                                       1998-05-1
                                                  Indels 17;
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Gaps

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                                                                            EHSADG-LMEQMCSSDFVVXMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTKRLVL
                                                                                                                  VXDRCAPVMSAFGFFWFDMLECDRFFPQDNDLCIPLASSDHLLPATBEAP----KVCEACKN
                                                                                                                                 VRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH--LPAT--APPVTKICAQCEM 186
WLKDSLQCTCEEWNDINAPYLVMGQKQGGELVITSVKRWQKGQREFK
                             HMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMK 292
                                                                                                                                                                                                                               SLLLLFLASHCCLGSARGLFLFG-QPDFSYKRSNCKP----IPVNLQLCHGIEYQNMRL
                                                          KNDDDNDIMETLCKNDFALKIKVKEITYINRDTKIILETKSKTIYKLNGVSERDLKKSVL
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Search completed: March 22, 2006, 22:43:55 Job time: 48 secs

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Sequence: Title: Perfect score:

Scoring table:

BLOSUM62

Gapop 10.0 , Gapext 0.5

US-10-768-566-1 1730

Post-processing: Minimum Match 0%
Maximum Match 10

100%

Minimum DB seq Maximum DB seq

length: 0 length: 2000000000

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Total number of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
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US-10-146-474-6
US-10-318-604-2
US-10-310-764-6
US-10-318-604-5
US-10-768-566-1
US-10-138-434A-3
US-10-138-434A-3
US-10-138-792-148
US-10-768-149-5611
US-10-466-136-3
US-10-466-136-3
US-10-466-136-3
US-10-666-851-7
US-10-817-525-2
US-10-817-525-2
US-10-817-525-2
US-10-817-972-77
US-10-847-972-77
US-10-426-136-7
US-10-426-136-7
US-10-426-586-6
US-10-426-136-7
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802.739 Million cell updates/sec
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9, 
                                                                                                      LENGTH: 317 amino acids
TYPE: amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO:
US-10-146-474-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 1
US-10-146-474-6
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Publication No. US20030023061A1
GENERAL INFORMATION:
APPLICANT: Umansky, Samuil
                       Query Match 100.0%; Score 1730;
Best Local Similarity 100.0%; Pred. No. 4.0
Matches 317; Conservative 0; Mismatches
                                                                                                                                                                                                                                                  TELEPHONE: (650) 494-0792
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/10/146,474
FILING DATE: 14-May-2002
CLASSIPICATION DATA:
APPLICATION DATA:
APPLICATION UNMBER: US/08/937,067
FILING DATE: 40hknown>
PRIOR APPLICATION UNMBER: US/08/937,067
FILING DATE: 40hknown>
ATTORNEY/AGENT INFORMATION:
NAME: Lehnhardt, Susan K.
REGISTRATION UNMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20018
TELECOMMUNICATION INFORMATION:
TELEBUNE: 16500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSES: WORRISON & FOERSTER
STREET: 755 Page Mill Road
CITY: Palo Alto
STATE: CA
COUNTRY: USA
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TITLE OF INVENTION: A FAMILY OF GENES ENCODING
APOPTOSIS-RELATED PETTIDES; PETTIDES ENCODED THEREBY AND
METHODS OF USE THEREOF
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US-10-847-972-61
US-10-432-256-5
US-10-10-1764-2
US-10-10-1764-2
US-10-177-293-142
US-10-177-293-142
US-10-295-027-1345
US-10-847-972-78
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US-10-847-972-78
US-10-847-972-78
US-10-847-972-78
US-10-999-994-3
US-09-978-697-415
US-09-978-697-415
US-09-978-192A-415
US-09-978-192A-415
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US-09-978-189-415
US-09-978-189-415
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                                                                       DB 4;
                                                                       Length 317;
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Sequence 5, Appli
Sequence 5, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 142, Appli
Sequence 1145, App
Sequence 107, Appli
Sequence 78, Appli
Sequence 2, Appli
Sequence 3, Appli
Sequence 415, App
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Result No.

Score

Query Match

Length DB

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1730 1730 1730 1730 1730 1730 1613 924.5 925.5 926.5 926.5 927.5 9

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Sequence 2, Application US/10338604

Publication No. US20030143610A1

GENERAL INFORMATION:
GENERAL SUFFICIANT: XL, HABYAN

ITTLE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC
ITTLE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC
ITTLE OF INVENTION: DISORDERS, INCLUDING OBSSITY AND DIABETES
ITLE REFERENCE: MPT01-250PIRM
CURRENT APPLICATION NUMBER: US/10/338,604
CURRENT FILING DATE: 2003-01-08
PRIOR APPLICATION NUMBER: 60/346,523
PRIOR FILING DATE: 2002-01-08
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 317
TYPE: PRT
ORGANISM: Homo sapiens
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                                                                                 KRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFS
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                                                                KRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFS
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US-10-301-764-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/301,764
FILING DATE: 20-No. US20040039184A1-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/937,067
FILING DATE: CUnknown>
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 33,943
REFERENCES/DOCKET NUMBER: 33,943
REFERENCES/DOCKET NUMBER: 33647-20018.00
TELEPAX: (650) 494-0792
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTER.STICS:
SEQUENCE CHARACTER.STICS:
SEQUENCE CHARACTER.STICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 6, Application US/10301764 Publication No. US20040039184A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity Matches 317; Conserv
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: protein SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
301
                                241
                                                                                                181
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                                                                                                                                                                                                                                                                                             CAQCEMEHSADGIMEQMCSSDFVVXMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDT
                                                                                                                                                                                  IYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKI
                                                   KRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKVKEMKFAVKFMFS
                                                                                                CAQCEMENSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDT
                                                                                                                                                              IYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVTKI
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COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 755 Page
CITY: Palo Alto
 YPCSLYYPFFYGAAEPH
                                KRIVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 317 amino acids
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 1730; DB 4; 100.0%; Pred. No. 4.6e-169; tive 0; Mismatches 0;
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9

Length

317; 0

Gaps

180 180

240

240

300

300

120 120

60

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APPLICANT: Umansky, Samuil
Melkonyan, Hovsep
TITLE OF INVENTION: A PAMILY OF GENES ENCODING
APOPTOSIS-RELATED PEPTIDES;
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
STREET: 755 Page Mill Road
                                                                                                   METHODS OF USE THEREOF
                                                                                                                            PEPTIDES ENCODED THEREBY
                                                                                                                            AND
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Version #1.30

Indels

<u>,</u>

Gaps

66

303

306 243

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CURRENT APPLICATION NUMBER: US/10/768,566
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 317
TYPE: PRT
ORGANISM: Human
US-10-768-566-1
Sequence 5, Application US/10338604

Publication No. US20030143610A1

GENERAL INFORMATION:
APPLICANT: XI, Haiyan

TITLE OF INVENTION: METHODS FOR THE TREATMENT OF METABOLIC
TITLE OF INVENTION: DISORDERS, INCLUDING OBESITY AND DIABETES
FILE REFERENCE: MPI01-250Plam

CURRENT APPLICATION NUMBER: US/10/338,604

CURRENT FILING DATE: 2003-01-08

PRIOR APPLICATION NUMBER: 60/346,523

PRIOR APPLICATION NUMBER: 60/346,523

PRIOR FILING DATE: 2002-01-08

NUMBER OF SEQ ID NOS: 6

SOPTWARE: FASUSEQ for Windows Version 4.0

SEQ ID NO 5

SEQ ID NO 5

LENGTH: 314
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US-10-338-604-5
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Best Local Similarity 100.
Matches 317; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Chada, Kiran K.
APPLICANT: Chouinard, Roland
APPLICANT: Chouinard, Roland
APPLICANT: Ashar, Hena
APPLICANT: Sayed, Abu
TITLE OF INVENTION: A METHOD OF TREATING OBESITY AND METABOLIC DISORDERS
TITLE OF INVENTION: A METHOD OF TREATING OBESITY AND METABOLIC DISORDERS
FILE REFERENCE: 69014-B
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Pred. No. 4.6e-169;
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                                                                                                                                                                                                  AND DIABETES
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US-10-146-474-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 93.2%;
Best Local Similarity 94.9%;
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                                        TELEPHONE: (650) 813
TELEPAX: (650) 494-0
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                  NAME: Lehnhardt, Susan K.
REGISTRATION NUMBER: 33,943
REFERENCE/DOCKET NUMBER: 23647-20018.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 813-5600
                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/937,067
FILING DATE: «Unknown»
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Umannky, Samuil

Melkonyan, Hovsep

TITLE OF INVENTION: A FAMILY OF GENES ENCODING

APOPTOSIS-RELATED PEPTIDES; PEPTIDES ENCODED THEREBY AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON
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                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/10/146,474
FILING DATE: 14-May-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Palo Alto
                            LENGTH: 314 amino acids
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Pred. No. 4.9e-157;
5; Mismatches 11;
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; NUMBER OF SEQ ID NOS: 27
; SOCTWARE: PATENTIN Ver. 2.
; SEQ ID NO 3
; LENGTH: 314
; TYPE: PRT
; ORGANISM: HOMO BADIENB
US-10-138-434A-3
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US-10-138-434A-3
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Best Local Sim:
Matches 179;
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APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES APPLICANT: Rubin, Jeffrey S.

APPLICANT: Finch, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/10138434A Publication No. US20030175864A1
                                                                                                                                        Query Match
Best Local
                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 09/087,031
PRIOR FILING DATE: 1998-05-29
PRIOR APPLICATION NUMBER: US 60/050,495
PRIOR FILING DATE: 1997-06-23
PRIOR APPLICATION NUMBER: US 60/050,417
PRIOR FILING DATE: 1997-05-29
                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 4239-62520
CURRENT APPLICATION NUMBER: US/10/138,434A
CURRENT FILING DATE: 2002-05-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: He, Xi
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING HUMAN FRP AND FRAGMENTS THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            298
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                                                                                                                                         Similarity
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MKKMKNHECPTFOSVF 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VKFMFSYPCSLYYPFF 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFA
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                                                     MGIGRSEGGRRGAALGVLLALGAALLAVGSASEYDYVSFQSDIGPYQSGRFYTKPPQCVD
                                                                                 MRAAAAAGGVRTAALALL--LGALHWAPARCEEYDYYGWQAE--PLH-GRSYSKPPQCLD
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                                                                                                                        Conservative
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                                                                                                                    53.4%; Score 924.5; DB 4; 56.6%; Pred. No. 3.5e-86; tive 51; Mismatches 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53.4%; Score 924.5; DB 4; 56.6%; Pred. No. 3.5e-86;
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                                                                                                                                                        DB 4;
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US-10-301-764-7
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Publication No. US20040039184A1
GENERAL INFORMATION:
APPLICANT: Umansky, Samuil
                                                                                    Query Match
Best Local S
                                                                   Matches
                                                                                                                                                                                                                                               TELEFAX: (650) 494-0
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/301,764
FILING DATE: 20-No. US20040039184A1-2002
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/937,067

FILING DATE: «UDKCHOWN'S

ATTORNEY/AGENT INFORMATION:

NAME: Lehnhardt, Susan K.

REGISTRATION NUMBER: 33,943

REFERENCE/DOCKET NUMBER: 23647-20018.00

TELECOMMUNICATION INFORMATION

TELEPHONE: (650) 813-5600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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TITLE OF INVENTION: A FAMILY OF GENES ENCODING
APOPTOSIS RELATED PETTIDES;
                                                                                                                                                           SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
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MGIGRSEGGRRGAALGVLIALGAALLAVGSASEYDYVSFQSDIGPYQSGRFYTKPPQCVD
                               MRAAAAAGGVRTAALALL--LGALHWAPARCEEYDYYGWQAE--PLH-GRSYSKPPQCLD 55
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STATE: CA
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                                                                                                                                                                                               STRANDEDNESS: single
                                                                                                                                                                                                               TYPE: amino acid
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                                                                                                                                                                                                                              LENGTH: 314 amino acids
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STREET: 755 Page Mill Road
                                                                     Conservative
                                                                                                                                                                                 linear
                                                                   53.4%; Score 924.5; DB 4
56.6%; Pred. No. 3.5e-86;
tive 51; Mismatches 77
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                                                                                                   DB 4;
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CURRENT APPLICATION NUMBER: US/10/666,851
CURRENT FILING DATE: 2003-09-19
PRIOR APPLICATION NUMBER: US 10/169,545
PRIOR FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: US 60/412,379
PRIOR FILING DATE: 2002-09-19
PRIOR FILING DATE: 2002-09-19
PRIOR FILING DATE: 2002-09-19
PRIOR FILING DATE: 2002-09-19
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SEQ ID NO 2
LENGTH: 314
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/10666851
Publication No. US20040115195A1
GENERAL INFORMATION:
APPLICANT: Bodine, Peter
                                                                                                                                                                                                                                                                                                                                                                                  Matches 179;
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS AND METHODS USING SECRETED FRIZZLED TITLE OF INVENTION: PROTEIN
                                                                                                                            180
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MKKMKNHECPTFQSVF
                                                             POGTTVCPPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGP
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                                                                                                                                                                                        CLDRPIYPCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCIAMTPPNATEASK 179
                                                                                                                                                                                                               CLDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATA
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                               VKFMFSYPCSLYYPFF 310
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                                                                                                                                                                                                                                                                                                                                                                                                                Length 314;
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              ; ORGANISM: Homo US-10-756-149-5611
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                                            TYPE: PRT
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CURRENT APPLICATION NUMBER: US/10/788,792
CURRENT FILING DATE: 2004-02-27
PRIOR APPLICATION NUMBER: US 60/450,655
PRIOR FILING DATE: 2003-02-28
NUMBER OF SEQ ID NOS: 254
SOPTWARE: Patentin version 3.2
SEQ ID NO 148
LENGTH: 314
TYPE: PRT
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                                                                                                                                  APPLICANT: Aziz, Natasha
APPLICANT: Zlotnik, Albert
APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: NOVEL METHODS OF DIAGNOSIS OF METASTATIC CANCER, COMPOSITIONS AND
TITLE OF INVENTION: METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER
FILE REPERENCE: file
CURRENT APPLICATION NUMBER: US/10/756,149
CURRENT FILING DATE: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
SOFTWARE: PATENTIN VERSION 3.2
SEQ ID NO 5611
LENGTH: 387
LENGTH: 387
LENGTH: 387
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LENGTH: 387
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Publication No. US20040191819A1
GENERAL INFORMATION:
APPLICANT: Bayer Pharmaceuticals Corporation
APPLICANT: Eveleigh, Deepa
APPLICANT: Bigwood, Douglas
TITLE OF INVENTION: EXPRESSION PROFILES FOR BREAST CANCER AND METHODS OF USE
FILE REFERENCE: 5152
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Best Local Similarity 56.6
Matches 179; Conservative
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Query Match
Best Local Similarity
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                                                                                             Sapiens
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56.6%; Pred. No. 3.5e-86;
tive 51; Mismatches 77
53.4%;
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  Pred. No. 3.5e-86;
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FILE REFERENCE: 53990

CURRENT APPLICATION NUMBER: US/10/425,586

CURRENT FILING DATE: 2003-04-28

PRIOR APPLICATION NUMBER: US/09/546,043

PRIOR FILING DATE: 2000-04-10

NUMBER OF SEQ ID NOS: 13

SOFTWARE: PATENTIN Ver. 2.1

SEQ ID NO 3

LENGTH: 313
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US-10-425-586-3
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Publication No. US20030187223A1
GENERAL INFORMATION:
APPLICANT: Rubin, Jeffery et al.,
                                                                                                                                                                                                                                                                                                                                                                                                            Matches 179;
                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
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TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN, 8FRP, FRAGMENTS AND
TITLE OF INVENTION: METHODS OF USE THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
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                                                         RLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFSY 301
                                                                                                              PPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGPIKKKDLK
                                                                                                                                                AQCEMEHSADGLMEOMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTK 241
                                                                                                                                                                                                                         PCRSICEAVRAGCAPIMEAYGFPWPEMIHCHKFPLDNDICIAVQFGH-LPATAPPVTKIC 181
                                                                                                                                                                                                                                                                                    CHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIY 122
                                                                                                                                                                                                                                                                                                                                                                        GGVRTAALALLIGALHWAPAR--CEEYDYYGWQAE--PLH-GRSYSKPPQCLDIPADLPL
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   PCSLYYPFF 310
                                        KLVLYLKNGADCPCHQLDNLSHHFLIMGRKVKSQYLLTAIHKWDKKNKEFKNFMKKMKNH
                                                                                                                                                                                      PCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCIAMTPPNATEASKPQGTTVC
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US-10-425-586-4
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US-10-466-136-3
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                                                                                                                                            Sequence 4, Application US/10425586
Publication No. US20030187223A1
GENERAL INFORMATION:
APPLICANT: Rubin, Jeffery et al.,
TITLE OF INVENTION: SECRETED FRIZZLED RELATED PROTEIN, SFRP,
TITLE OF INVENTION: METHODS OF USE THEREOF
PILE REFERENCE: 53990
CURRENT APPLICATION NUMBER: US/10/425,586
CURRENT FILING DATE: 2003-04-28
PRIOR APPLICATION NUMBER: US/09/546,043
PRIOR FILING DATE: 2000-04-10
NUMBER OF SEQ ID NOS: 13
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 4
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SEQ ID NO 3
LENGTH: 313
TYPE: PRT
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Publication No. US20040077828A1
GENERAL INFORMATION:
APPLICANT: Rubin, Jeffery et al.,
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                        RLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFSY 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGPIKKKDLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AQCEMEHSADGIMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLIKPGPLKRKDTK 241
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                                                                                                                                                                                                                                                                                                                                       ECPTFQSVF 312
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53.0%; Score 917; DB 4
57.9%; Pred. No. 2e-85;
tive 50; Mismatches
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243

185 181

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Sequence 4, Application US/10466136

Publication NO. US20040077828A1

GENERAL INFORMATION: Jeffery et al.,
APPLICANT: Rubin, Jeffery et al.,
TITLE OF INVENTION: SFRP AND PEPTIDE MOTIFS THAT INTERACT WITH SFRP AND
TITLE OF INVENTION: METHODS OF THEIR USE
FILE REFERENCE: 4239-61994

CURRENT APPLICATION UNMBER: US/10/466,136

CURRENT APPLICATION UNMBER: US 60/260,908

PRIOR APPLICATION UNMBER: US 60/260,908

PRIOR FILING DATE: 2001-01-10

NUMBER OF SEQ ID NOS: 40

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 4

LENGTH: 338

TYPE: PRT

ORGANISM: Artificial Sequence
FEATURE:
FOTHER INFORMATION: Description of Artificial Sequence: Primer/Probe
US-10-466-136-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
US-10-466-136-4
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-425-586-4
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Best Local Sim:
Matches 179;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 AQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTK 241
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PCRWLCEAVRDSCEPVMQFFGFYWPEWLKCDKFP-EGDVCIAMTPPNATEASKPQGTTVC
                                                                       CHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDRPIY 122
                                                                                                                                                                          GGVRTAALALLLGALHWAPAR--CEEYDYYGWQAB--PLH-GRSYSKPPQCLDIPADLPL
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                                PCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATAPPVTKIC 181
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Search completed: March 22, 2006, 22:46:46 Job time: 166 secs

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GenCore version (c) 1993 - 2006

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1: geneseqp1980;
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Pred. No. is the score greater the and is derived be is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.

SUMMARIES

Result No.

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Score	1730	1730	1730	1730	1723	1613	1613	924.5	924.5	924.5	924.5	924.5	924.5	917	917	917	917	917	917	916	915	915	915	915
Query Match	100.0	80.	•	100.0	•	93.2	•	•	53.4	53.4	53.4	53.4	53.4	53.0	53.0	53.0	53.0	53.0	٠	•	52.9	•	٠	52.9
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ID	AAW37816	3828	24	ADP56062	AAW73507	ADA38292	ADM67241	AAW37817	AAW88528	ABP72785	ABP72783	ADP68536	ADR99142	ABB82244	ADC71186	ADH43308		ADC71187	ADH43309	ABM82799	AAE10154	AAU07695	ABP72784	ABR61428
Description	Aaw37816	3828	Adm67242	Adp56062	350	Ada38292	Adm67241	Aaw37817	Aaw88528	Abp72785	Abp72783	Adp68536	Adr99142	Abb82244	Adc71186	Adh43308	Abb82245	Adc71187	Adh43309	Abm82799	Aae10154	Aau07695	Abp72784	Abr61428
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
620.5	620.5	626	627	627	627	627	659	659	659	714	714	714	903	903	909	915	915	915	915	915
35.9	35.9	36.2	36.2	36.2	36.2	36.2	38.1	38.1	38.1	41.3	41.3	41.3	52.2	52.2	52.5	52.9	52.9	52.9	52.9	52.9
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ABG31500	AAW37943	AAY74087	AAE34060	AAE34072	ABU55918	ABU55906	ADH43311	ADC71189	ABB82247	ADH43312	ADC71190	ABB82248	ADU86506	ABR61427	ABR61429	ADX58916	ADV44810	AEA64566	ADU86503	ADP68541
Abg31500	Aaw37943	Aay74087	Aae34060	Aae34072	Abu55918	Abu55906	Adh43311	Adc71189	Abb82247	Adh43312	Adc71190	Abb82248	Adu86506	Abr61427	Abr61429	Adx58916	Adv44810	Aea64566	Adu86503	Adp68541
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ALIGNMENTS

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ARBSULT 1
AAW37816
JD AAW37816
AC AAW3
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Peptide
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N-PSDB; AAV19114.
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11-OCT-1996;
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96US-0028363P.
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29. .317
/label= Mat_protein
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Secreted apoptosis-related protein; SARP; hSARP3; human; prostate cancer; breast cancer; diagnosis; gene therapy.

Human secreted apoptosis-related protein hSARP3.

28-AUG-1998 AAW37816;

(first entry)

AAW37816 standard; protein; 317 AA

This polypeptide comprises human secreted apoptosis-related protein ISARP3 that modulates apoptosis through cell-cell or cell-extracellular matrix signalling. Its amino acid sequence was deduced from a clone (see AAVI9114) obtained from a human pancreas cDNA library. Murine mSARP1 (see

New secreted apoptosis-related proteins - useful for modulating apoptosis, particularly for treatment of prostatic or breast cancer, for diagnosis and monitoring of disease.

also

Claim 1;

Page

56-58;

101pp; English.

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RRSULT 2
ADA32
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AC ADA3
XX
DT 20-N
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Best Local S
Matches 317
                                                                                                                                                                                                                                                                                                                              obesity; overweight; diabetes; insulin resistance; cachexia; anorexia; beta-catenin; leptin; insulin sensitivity; food intake; body weight change; glucose tolerance; hyperplastic growth; cell differentiation; programmed cell death; apoptosis; cell differentiation; programmed cell death; apoptosis; natisense; ribozy; hypertrophic growth; modulator; agonist; antiagonist; antisense; ribozy; lipid; glucose; insulin; adipocyte; differentiation; adipose cell; adipocyte; anorectic; antidiabetic; immunomodulator.
08-JAN-2003; 2003US-00338604
                                                                                      31-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human secreted apoptosis related protein (SARP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADA38289 standard; protein; 317
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                                                                                                                                                                       US2003143610-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; metabolic disorder; Secreted Apoptosis-Related Proteins 3; SARP3;
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100.0%; Pred. No. 2.5e-176;
tive 0; Mismatches 0;
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Claim 6; SEQ ID NO 2; 35pp; English
                                                                                                                                                                                                                        Identifying a compound for treating a metabolic disorder, e.g., diabetes by assaying the ability of the compound to modulate a Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide
                                                                                                                                                                                                                                                 WPI; 2003-635956/60.
N-PSDB; ADA38288, ADA38290
                                                                                                                                                                                                                                                                                             08-JAN-2002; 2002US-0346523P
                                                                                                                                                                                                                                                                                 (MILL-) MILLENNIUM PHARM INC
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The invention discloses a method for identifying a compound for treating compound to modulate disorder which comprises assaying the ability of the compound compound to modulate Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide activity. Also claimed are methods for compound to modulate SARP3 nucleic acid expression or polypeptide activity and a pharmaceutical formulation for compound to modulate SARP3 nucleic acid expression or compound to modulate SARP3 nucleic acid expression or complypeptide activity is determined by detecting a SARP3 activity of a cell, or by detecting modulation of the level of beta-catenin, leptin or complypeptide activity, food intake, body weight change, glucose tolerance, comprises contacting a cell or tissue expression to comprises contacting a cell or tissue expressing the SARP3 with a SARP3 comprises contacting a cell or tissue expressing the SARP3 with a SARP3 comprises contacting a cell or tissue expressing the SARP3 with a SARP3 comprises the ability to modulate romprises a small molecule SARP3 comprises the ability to modulate ripid, glucose or insulin metabolism, adipocyte growth, the differentiation of adipose cell progenitors into adipocyte sor programmed cell death. Treating a subject having a cell comprises the ability to modulate lipid, glucose or insulin metabolism, adipocytes or polypeptide activity comprises administering a SARP3 condulator. The compound is an oligonucleotide encoding an antisense or modulator. The compound is an oligonucleotide encoding an antisense or categors sarp3 gene and inhibits transcription. The sequence presented is the fuman SARP3 gene and inhibits transcription. The sequence presented is the Query Match Best Local S Matches 317 Sequence al Similarity 317; Conser 317 Conservative 100.0%; Score 1730; DB 6; 100.0%; Pred. No. 2.5e-176; tive 0; Mismatches 0; Length 317; Indels 0 Gaps

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                                                                                                                                                                                                                                                                                     This invention relates to a novel method for identifying genes that are cover-expressed in adipose tissue and as such it provides targets for anticobesity pharmaceutical compositions. Specifically, it refers to a high combility group I-C protein (HMGI-C) that is associated with obseity and is epistatic to leptin, furthermore, it refers to the ob gene where an autosomal recessive trait is linked to obesity and diabetes. The present invention describes performing differential gene expression analysis between the white adipose tissue (WAT) or stromal vascular tissue (SVT) of any two different mice selected from a group consisting of wild-type, this method novel nucleotides and the encoded proteins thereof were identified that are adipocyte specific, and as such can be used for preventing adipogenesis, diagnosing and treating diabetes, obseity, hypertension and cardiovascular disease, as well as screening for cobesity. These compositions exhibit anorectic, antidiabetic and treat diabetes or obesity. These compositions exhibit anorectic, antidiabetic and cardiovascular disease, as well as screening for the protein sequence is a human homologue of a murine adipocyte specific protein sequence of the invention.
                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying adipocyte specific genes, useful for treating obesity or diabetes, and for identifying drug targets, by differential gene expression analysis between adipose tissue or stromal vascular tissue
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12-JUN-2003; 2003US-0478206P.
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The present invention describes an isolated PRO nucleic acid (I). Alt described: (1) a vector comprising (I); (2) a host cell comprising the vector of (1); (3) a process for producing a PRO polypeptides; (4) are isolated PRO polypeptide; (5) a chimeric molecule comprising the polypeptide of (4) fused to a heterologous amino acid sequence; (6) antibody which specifically binds to a polypeptide of (4); (7) a composition of matter comprising a polypeptide of (4), an agonist or antagonist of the polypeptide or an antibody that binds to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human; PRO; immune related disease; inflammatory immune response; immune response stimulation; antiallergic; antianaemic; antiarthritic; antiasthmatic; antidiabetic; antiinflammatory; antipsoriatic; antithyroid; CNS; dermatological; gastrointestinal; haemostatic; hepatotropic; immunostimulant; immunosuppressive; muscular;
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                                                                                                                                                                                                                                                                                                                                                                                                   New PRO polynucleotides and polypeptides, useful in useful in diagnosing and treating an immune related disease, e.g. systemic lupus erythematosus, rheumatoid arthritis, diabetes mellitus or asthma and in
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                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 2038; 3009pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 317; Conserv
                                                                                                                                                                Human; ATG-1709 protein; secreted ligand; 7-Transmembrane receptor; heart disease; hypertension; cardiovascular disease; kidney disease beasty; insulin resistance; diabetes; Central Nervous System disor
                                                                                                                                                                                                                                              Human ATG-1709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 317 AA;
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                                                                                                                                                  therapy; sFRP-1.
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16-JAN-1998;
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 98EP-00300313
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence represents the human ATG-1709 protein of the invention. ATG c-1709 is related to human secreted ligands for 7-Transmembrane receptors care useful for diagnosing susceptibility to diseases by detecting mutations in the ATG-1709 gene using probes containing the ATG-1709 comutations in the ATG-1709 gene using probes containing the ATG-1709 comutations in the ATG-1709 gene using probes containing the ATG-1709 comutations in the ATG-1709 gene using probes containing the ATG-1709 completely determining ATG-1709 polypeptide expression levels. ATG-1709 completely and can diagnose diseases associated with ATG-1709 completely and antagonists which completely and the ATG-1709 polypeptide. These can be used in treatment to activate or inhibit ATG-1709 polypeptide. These can be used in treatment to activate cor inhibit atg-1709 polypeptides to treat conditions associated with a lack of ATG-1709 polypeptides to treat conditions associated with a lack of ATG-1709. Gene therapy may calso be used to affect endogenous ATG-1709. Gene therapy may calso be used to affect endogenous ATG-1709 compose to immunise and contibodies are useful for inducing an immune response to immunise and contibodies are useful for isolating ATG-1709 colones or purifying the prevent disease, and for isolating ATG-1709 colones or purifying the collypeptides by affinity chromatography. ATG-1709 polypeptides can be administered directly or as a vaccine to inoculate against disease. The ATG-1709 polypeptide is also useful for mapping the gene to a chromosome, allowing gene inheritance to be studied through linkage analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 316
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08-AUG-1997;
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97US-00907808.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1723; DB 2;
Pred. No. 1.4e-175;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 317;
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RESULT 6 ADA38292

ADA38292 standard;

protein;

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The invention discloses a method for identifying a compound for treating CC a metabolic disorder which comprises assaying the ability of the compound CC to modulate Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid cexpression or polypeptide activity. Also claimed are methods for CM metabolic disorder characterised by aberrant SARP3 nucleic acid CC expression or polypeptide activity and a pharmaceutical formulation for treating metabolic disorders. The metabolic disorders comprise obesity, CC overweight, diabetes, insulin resistance, cachexia or anorexia. The CM polypeptide activity is determined by detecting a SARP3 activity of a cC cell, or by detecting modulation of the level of beta-catenin, leptin or insulin sensitivity, food intake, body weight change, glucose tolerance, CM pyperplastic growth. Modulating SARP3 mediated metabolic activity of modulator. The compound or modulator comprises a small molecule SARP3 cC comprises contacting a cell or tissue expressing the SARP3 with a SARP3 cc sample or ribozyme. The SARP3 mediated metabolic activity of modulator. The compound or modulator comprises a small molecule SARP3 comprises to ranagonist or inverse agonist, anti-SARP3 antibody, antisense c sampla molecule or ribozyme. The SARP3 mediated metabolic activity comprises the ability to modulate lipid, glucose or insulin metabolism, call death. Treating a subject having a metabolic disorder characterised by aberrant SARP3 nucleic acid corporates or programmed cell death. Treating a subject having a mediated metabolic modulate. The compound is an oligonucleotide encoding an antisense or ribozyme molecule that forms a triple helix with the promoter of the SARP3 gene and inhibits transcription. The sequence presented is the compound inhibits transcription. The sequence presented is the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse; metabolic disorder; Secreted Apoptosis-Related Proteins 3; SARP3; obesity; overweight; diabetes; insulin resistance; cachexia; anorexia; beta-catenin; leptin; insulin sensitivity; food intake; body weight change; glucose tolerance; hyperplastic growth; cell differentiation; programmed cell death; apoptosis; hypertrophic growth; modulator; agonist; antagonist; antisense; ribozyme; lipid; glucose; insulin; adipocyte; differentiation; adipose cell; adipocyte; anorectic; antidiabetic; immunomodulator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Identifying a compound for treating a metabolic disorder, e.g., diabetes by assaying the ability of the compound to modulate a Secreted Apoptosis-Related Proteins 3 (SARP3) nucleic acid expression or polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouse secreted apoptosis related protein (SARP)
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)B; ADA38291, ADA38293.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002US-0346523P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35pp; English.
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Sequence

This invention relates to a novel method for identifying genes that are over-expressed in adipose tissue and as such it provides targets for an obseity pharmaceutical compositions. Specifically, it refers to a high mobility group I-C protein (HMGI-C) that is associated with obesity and

anti

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Matches 295;
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                              Identifying adipocyte specific genes, useful for treating obesity or diabetes, and for identifying drug targets, by differential gene expression analysis between adipose tissue or stromal vascular tissumice of different genotypes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    murine; mouse; adipocyte specific; adipose tissue; anti-obesity; high mobility group I-C protein; HMGI-C; obesity; leptin; ob; di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Murine adipocyte specific sFRP-5 protein SeqID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADM67241 standard;
                                                                                                                                                                                    Chada
                                                                                                                                                                                                                                                           29-JUL-2002;
12-JUN-2003;
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                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              high mobility adipogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-JUN-2004
                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                                                                                 29-JUL-2003; 2003WO-US023684.
                                                                                                                                                                                                                                                                                                                                                     05-FEB-2004
                                                                                                                                                                                                                         (HMGE-) HMGENE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                              2004-143846/14.
)B; ADM66968.
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                                                                                                                                                                                  Chouinard
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                                                                                                                                                                                                                                                           2002US-0398785P.
2003US-0478206P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                               group I-C protein; HMGI-C; obesity; 10 hypertension; cardiovascular disease; hypotensive; sFRP-5.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein; 314 AA
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                                                                                                                                                                                    Ashar
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Pred. No. 8
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English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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                                                                                                                                                                                                                                                                                  Key
Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Secreted apoptosis-related protein; SARP; hSARP2; human; prostate cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW37817;
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24-SEP-1996;
11-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                breast cancer;
                                                                                     24-SEP-1997;
                                                                                                                                             02-APR-1998
                                                                                                                                                                                                                                                                                                                                                                           sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apoptosis-related protein hSARP2.
96US-0026603P
96US-0028363P
                                                                                                                                                                                                                                                                                                                                                                                                                                diagnosis; gene therapy
                                                                                     97WO-US017154.
                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93.2%;
                                                                                                                                                                                                                                                             "non-Frizzled-like C-terminal domain"
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Pred. No. 8.6e-164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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This polypeptide comprises human secreted apoptosis-related protein CC hSARP2 that modulates apoptosis through cell-cell or cell-extracellular CC matrix signalling. Its amino acid sequence was deduced from a clone (see CC AAV19115) obtained from a human heart cDNA library. Murine mSARP1 (see CC AAW19115) obtained from a human heart cDNA library. Murine mSARP1 (see CC AAW37814), human hSARP1 (see AAW37815) and hSARP3 (see AAW37816) proteins CC are also claimed. hSARP2 is expressed in most human tissues. It has protein to the cells. Antibodies specific for SARP can be used in immunoassays for CC detecting levels of SARP expression, particularly for diagnosis or CC detect cancer of the prostate or breast (by detecting hSARP1 and 2, CC respectively). SARP polypeptides and nucleic acids can also be used to CC treat these cancers, or more generally apoptosis-related disease (e.g. CC infection with HIV or reperfusion injury), also (not claimed) to prevent CC transplantation, for in situ preservation for bypass operations and to CC treat dermatological disorders. SARP polypeptides can also be used to CC identify agents, potentially useful therapeutically, that modulate the CC effects of SARP on Wnt-frizzled protein interaction
                                               Sequence 314 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 apoptosis, particularly for treatment of for diagnosis and monitoring of disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New secreted apoptosis-related proteins - useful for modulating apoptosis, particularly for treatment of prostatic or breast cancer, also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 58-59; 101pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Umansky S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (LXRB-) LXR BIOTECHNOLOGY INC
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DB 2;
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RESULT 9
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                                                                                                                                                                                                             IPADLPLCHTVGYKRMRLPNILLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPV 115
                                                                                                                                                                                                                                                                                                                                                                        MRAAAAAGGVRTAALALL--LGALHWAPARCEEYDYYGWQAE--PLH-GRSYSKPPQCLD
                                                         standard;
                                                                                                                                                                LKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFA
                                                                                                                                                                                                                                                                                  CLDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATA 174
                                                                                                                    MKKMKNHECPTFQSVF
                                                                                                                                          VKFMFSYPCSLYYPFF
                                                                                                                                                                                                                                                            CLDRPTYPCRWLCEAVRDSCEPVMQFFGFYWPEMLKCDKFP-EGDVCTAMTPPNPTEASK 179
                                                                                                                                                                                                                                                                                                         I PADLRICHNVGYKKMVLPNILEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFAPV
                                                                                                                                                                                                                                                                                                                                                         MGIGRSEGGRRGAALGVLLALGAALLAVGSASEYDYVSFQSDIGPYQSGRFYTKPPQCVD
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                56.6%;
                                                                                                                                                                                                                                                                                                                                                                                                      51;
                                                          314 AA
                                                                                                                                                                                                                                                                                                                                                                                                     Score 924.5; DB 2; Length Pred. No. 5.9e-90; Indels 1; Mismatches 77; Indels
                                                                                                                                                                                                                                                                                                                                                                                                      9
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                                                                                                                                                                                                                                                                                                             120
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11-MAR-1999 AAW88528;

(first entry)

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Query Match
Best Local Similarity
Matches 179; Conserv
                                                                                                                                                                                                                                                                                                                                                                  This represents a human FRP (frizzled-related protein) polypeptide. The FRP polypeptide comprises a Wht binding domain. Host cells containing a vector comprising the FRP nucleic acid are used to produce recombinant FRP which is a secreted antagonist of Wht-family cytokines. FRP is involved in cell growth, differentiation and migration and possibly can act as tumour suppressor. FRP is used in studies on oncogenesis and in design of cancer treatments, e.g. administration of cells transfected with the FRP gene. Antibodies that bind specifically to FRP are used to detect FRP in immunoassays. FRP can also be used to detect specific binding proteins (specifically the Drosophila Wingless protein, but more generally any Wnt molecule) in a sample, particularly for monitoring progress of neoplasia. Transgenic animals in which somatic and germ cells
                                                                                                                                                                                                                                                                   Sequence 314 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 5; Fig 1C; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New human frizzled-related protein and associated nucleic acid, probes, vectors - transformants, antibodies and transgenic animals, used to inhibit signalling by Wnt-family cytokines, potentially useful as tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rubin JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-MAY-1997;
23-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-MAY-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W09854325-A1
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                                                                                                                                                                                                                                                                                                                        therapeutic
                                                                                                                                                                                                                                                                                                                                            contain a transgene
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                                                                                                 MRAAAAAGGVRTAALALL--LGALHWAPARCEEYDYYGWQAE--PLH-GRSYSKPPQCLD
IPADLPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPV 115
                                                  MGIGRSEGGRRGAALGVLLALGAALLAVGSASEYDYVSFQSDIGPYQSGRFYTKPPQCVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Finch P,
                                                                                                                                                               Conservative
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97US-0050495P.
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173.
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57. .1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note=
                                                                                                                                                                                                                                                                                                                                               from human FRP are used to develop and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .175
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                                                                                                                                                         53.4%; Score 924.5; DB 2; 56.6%; Pred. No. 5.9e-90; :ive 51; Mismatches 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aaronson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Asn is potentially N-glycosylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Asn is potentially N-glycosylated"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "mature protein"
                                                                                                                                                      51; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
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                                                                                                                                                            Indels
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Conservative

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Score 924.5; DB 6 Pred. No. 5.9e-90; 1; Mismatches 77

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Length Indels

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                     The present sequence is the protein sequence of human secreted frizzled related protein (sFRP). A variant sFRP protein (see ABP72783) has been identified that is associated with ischaemic heart disease. The variant sequence differs from the present sequence in having Ala substituting for Pro at position 174. The invention provides sFRP variant nucleic acids, vectors, host cells, and methods of producing the variant polypeptide. The variant sFRP nucleic acids and polypeptides can be used to identify agents which modulate the expression or activity of the polypeptide, to identify binding partners for the protein, to raise antibodies, and as diagnostic, prognostic and therapeutic agents for ischaemic heart diseas
Sequence 314
                                                                                                                                                                                      Claim 1; Page 49-50; 57pp; English
                                                                                                                                                                                                                                  protein,
                                                                                                                                                                                                                                               New isolated nucleic acid encoding a human secreted frizzled related
                                                                                                                                                                                                                                                                                             WPI; 2003-342664/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                23-SEP-2002; 2002WO-US030100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; secreted frizzled related protein; sFRP; ischaemia; heart disease; cardiant; vasotropic; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human secreted frizzled related protein
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                                                                                                                                                                                                                                                                                                                                                        GENE LOGIC INC.
PROCTER & GAMBLE CO.
                                                                                                                                                                                                                                   useful for preparing a composition for treating ischemic heart
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATA 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MKKMKNHECPTFQSVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VKFMFSYPCSLYYPFF 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IKKKDLKKLVLYLKNGADCPCHQLDNLSHHFLIMGRKVKSQYLLTAIHKWDKKNKEFKNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPVTKICAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PQGTTVCPPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGP
 A.
                                                                                                                                                                                                                                                                                                                           White
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                                                                                                                                                                                                                                                                                                                           Bednarik D,
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disease.
The present sequence is the protein sequence of a human secreted frelated protein (sFRP) variant polypeptide that is associated with ischaemic heart disease. Expression of the corresponding mRNA was to be decreased in ischaemic heart tissue. The variant sequence di
                                                                                                                                                                              Disclosure;
                                                                                                                                                                                                                                                                                New isolated nucleic acid encoding a human secreted frizzled related protein, useful for preparing a composition for treating ischemic heaps and the second of the second 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-SEP-2001; 2001US-0323816P
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                                                                                                                                                                                                                                                       bone-formation; secreted frizzled related protein; sFRP; bone disorder; bone formation disorder; bone resorption disorder; bone density disorde degenerative bone disorder; osteodegeneration disorder; osteopenia; osteoarthritis; osteoporosis; type II osteoporosis; human; sFRP-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from the wild-type sequence in having an additional Ala residue at position 13 and having a Pro to Ala substitution at position 174. The position provides sFRP variant nucleic acids, vectors, host cells, and methods of producing the variant polypeptide. The variant sFRP nucleic acids and polypeptides can be used to identify agents which modulate the expression or activity of the polypeptide, to identify binding pareners for the protein, to raise antibodies, and as diagnostic, prognostic and
                                                                                                       31-MAY-2002;
19-SEP-2002;
                                                                                                                                                                                                                                                                                                                             Human secreted frizzled related
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                                                                                                                                                                                                                                                                                                                                                                                                            standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LKRKDTKRLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFA
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2002US-0412379P
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                                                                                                                                                                                                                                                                                                                                                                                                            protein;
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Pred. No. 5.9e-90;
1; Mismatches 77;
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                                                                                                                                                                                                                                                                                                                             protein,
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N-PSDB; ADP68535 WPI; 2004-449339/42

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                                                                                                        Homo sapiens
                                                                                                                                                           Cytostatic; breast cancer; cancer; human;
                                                                                                                                                                                           Secreted
                                                                                                                                                                                                                           02-DEC-2004
                                                                                                                                                                                                                                                                                      ADR99142 standard; protein; 314
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            osteodegeneration disorder, e.g. osteopenia, osteoarthritis, or osteoporosis, specifically type II osteoporosis. The present sequence represents the amino acid sequence of the human secreted frizzled rel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New compositions comprising secreted frizzled related protein (sFRP), anti-sFRP antibody, nucleic acid encoding sFRP or the antibody, or sFRP antisense nucleic acids, for regulating bone-forming activity or treating
           27-FEB-2004; 2004WO-US007268
                                             16-SEP-2004.
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                                                                                                                                                                                       frizzled-related protein 1,
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RESULT 14
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ID ABB82
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AC ABB82

ABB82244 standard; protein; 313

ABB82244;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC cancer in a patient. The method comprises comparing the level of carpression of one or more genes or gene products in a biological sample crown the patient with that in a normal patient sample, where a difference comparing the gene expression in the first sample compared to that in the second sample is a diagnostic of the disease. Also claimed are: method (M2) for constituting the response of a breast cancer patient to treatment with an claimed cancer agent; method (M4) for identifying a compound for treating compared to sample comprising two or more probes corresponding to genes selected from ADR99123-ADR99121 or comprising two or more probes corresponding to genes selected from ADR99122-ADR99248. In M1 and M2 the genes are selected from ADR99123 and the gene products are polypeptides selected from ADR99123 and the gene products are polypeptides selected from addiscase this useful for distinguishing between normal and disease tissue. M3 is useful for monitoring the response of a breast cancer. M2 and the array are useful for distinguishing between normal and disease tissue. M3 is useful correspondent to treatment with can anti-cancer agent. M4 is useful for identifying a compound for treating breast cancer. Note: The sequence data for this patent did not format directly from MIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 179; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Diagnosing breast cancer comprises comparing the level of expression of genes or gene products in a first biological sample taken from a patient with that in a normal patient sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 314 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 3; SEQ ID NO 148; 53pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-2003; 2003US-0450655P
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                                   VKEMESYPCSLYYPFF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 924.5; DB 8;
Pred. No. 5.9e-90;
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Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 32; Page 67-68; 81pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New secreted Frizzled-related protein-1-binding peptide, for enhancing stimulating osteoclast differentiation or to modify T-cell activity in subject with e.g. abnormal bone remodeling, achondroplasia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
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antiinflammatory; immunosuppressive; antibacterial;
cytostatic; antiarthritic; antirheumatic.
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ST VINCENTS INST MEDICAL RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
RLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFSY
                                                                                PPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIV--PKKKKPLKLGPIKKKDLK
                                                                                                                              AQCEMEHSADGIMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTK 241
                                                                                                                                                                                                                                    PCRSLCBAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATAPPVTKIC 181
                                                                                                                                                                                                                                                                                         CHNVGYKKMVLPNLLEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFAPVCLDRPIY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present sequence represents a human sFRP-1 protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 917; DB 5;
Pred. No. 3.7e-89;
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antiparasitic; human;
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                                                                                                                                                                                                             This invention relates to the discovery that sPRP (secreted frizzled CC related protein) and fragments thereof, can bind to and regulate the CC activity of members of the Wnt family of proteins. Specifically, it CC refers to the ability of sPRP proteins inhibiting Wnt activity at high CC concentrations, and conversely at low concentrations they increase Wnt CC biological activation. Furthermore, sPRP fragments that do not contain CC the CRD (cysteine rich domain) retain their Wnt binding activity. Wnt CC agents comprise a large family of structurally related, extracellular CC agents that have a variety of important functions during embryonic CC development. As such, the present invention describes compositions that CC can be used for treating developmental disorders associated with CC decreased or abnormal Wnt biological activity as well as for inducing the CC development of neoplasia for the study of tumour growth. This polypeptide SC sequence is the human sFRP-1 protein of the invention.
                                                                                                                          Query Match
Best Local S
Matches 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New secreted frizzled related polypeptide and its fragments, useful screening for modulators of Wnt biological activity for treating disorders associated with increased Wnt biological activity or for
                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 3; 27pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       suppressing tumor growth.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-APR-2000; 2000US-00546043
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human; sFRP-1; sFRP; secreted frizzled related protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human secreted frizzled related protein (sFRP)
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 CHNVGYKKMVLPNLLEHETMAEVKQQASSWVPLLNKNCHAGTQVFLCSLFAPVCLDRPIY
                                                            GGRRGAALGVLL-ALGGASGRGLGSEYDYVSFQSDIGPYQSGRFYTKPPQCVDIPADLRL
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                                                                                         GGVRTAALALLLGALHWAPAR--CEEYDYYGWQAE--PLH-GRSYSKPPQCLDIPADLPL
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Pred. No. 3.7e-89;
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Searc Job t	문	Ş	В	Ŋ	뮰	Ş	문	8
Search completed: March 22, 2006, 22:38:19 Job time : 189 secs	304 ECPTPQSVF 312	302 PCSLYYPFF 310	244 KLVLYLKNGADCPCHQLDNLSHHFLIMGRKVKSQYLLTAIHKWDKKNKBFKNFMKKMKNH 303	242 RLVLHMKNGAGCPCPQLDSLAGSFLVMGRKVDGQLLLMAVYRWDKKNKEMKFAVKFMFSY 301	186 PPCDNELKSEAIIEHLCASEFALRMKIKEVKKENGDKKIVPKKKKPLKLGPIKKKDLK 243	182 AQCEMEHSADGLMEQWCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDTK 241	127 PCRWICEAVRDSCEPVMQFFGFYWPEMIKCDKFP-EGDVCIAMTPPNATEASKPQGTTVC 185	123 PCRSLCBAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGH-LPATAPPVTKIC 181

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Result
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Qy 181 CAQCEMEHSADGIMEQMCSSDFVVKWRIKEIKIENGDRKLIGAQKKKKLLKPGPLKRKDT	YYGWQAEPLHGRSYSKPPQCLDIPAC 	RESULT 1 JE0175 frezzled protein-1b - human C;Species: Homo sapiens (man) C;Species: O3-Jul-1998 #sequence_revision 10-Jul-1998 #text_change 09-Jul-20 C;Date: O3-Jul-1998 #sequence_revision 10-Jul-1998 #text_change 09-Jul-20 C;Accession: JE0175 R;Hu, E; Zhu, Y; Fredrickson, T; Barnes, M; Kelsell, D; Beeley, L; R;Hu, E; Zhu, Y; Fredrickson, T; Barnes, M; Kelsell, D; Beeley, L; R;Hu, E; Zhu, Y; Fredrickson, T; Barnes, M; Kelsell, D; Beeley, L; Biochem. Biophys. Res. Commun. 247, 287-293, 1998 A;Title: Tissue restricted expression of two human frzbs in preadipocytes A;Reference number: JE0174; MUID:98308108; PMID:9642118 A;Reference number: JE0174; MUID:98308108; PMID:9642118 A;Molecule type: mRNA A;Residues: 1-317 <hua> A;Cross-references: UNIPROT:O14780; UNIPARC:UPI0000158811 C;Genetics: A;Gene: hFRP-1b A;Map position: 5q14.3-q12.1 Query Match 99.6%; Score 1723; DB 2; Length 317; Best Local Similarity 99.7%; Pred. No. 1.9e-147; Matches 316; Conservative 0; Mismatches 1; Indels 0; Gaps</hua>	85 4.9 465 2 S57564 nifB protein 84.5 4.9 1000 2 JED0110 mulcoporin 1 84.5 4.9 1365 2 T13991 nucleoporin 1 84 4.9 713 2 JC2334 RVLG protein 84 4.9 713 2 JC2334 CDA peptide 6 83.5 4.8 1513 2 T23681 metalloprotein 83.5 4.8 1513 2 T23681 metalloprotein 82.5 4.8 211 1 A53532 metalloprotein 81.5 4.7 892 2 T15195 hypothetical androgen rectal 1 81.5 4.7 1349 2 T13031 mild hypothetical 2 81.5 4.7 1349 2 T13031 phosphoribosy 1 81.5 4.7 1349 2 T13136 mild hypothetical 3 81 4.7 1608 2 T13216 mild hypothetical 3 81 4.7 1608 2 T13216 mild hypothetical 4 81 4.7 306 2 D82126 mild hypothetical 4 81 4.7 306 2 D82126 mild hypothetical 4 81 4.7 342 2 B31249 transforming 4 81 4.7 442 2 B31249	
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D. ncreas.

frizzled protein-2 - human
C;Species: Homo sapiens (man)
C;Date: 03-Jul-1998 #sequence_revision 10-Jul-1998 #text_change 09-Jul-2004

RESULT 2 JE0174

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RESULT 4
S03540
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R;Sagara, N.; Toda, G.; Hirai, M.; Terada, M.; Katoh, M. Biochem. Biophys. Res. Commun. 252, 117-122, 1998

A;Title: Molecular cloning, defferential expression, and A;Reference number: JE0337; MUID:99032814; PMID:9813155

A;Accession: JE0339
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C;Species: Homo sapiens (man)
C;Date: 05-Feb-1999 #sequence_revision 05-Feb-1999 #text_change
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R;Hu, E.; Zhu, Y:; Fredrickson, T.; Barnes, M.; Kelsell, R;Hu, E. Biophys. Res. Commun. 247, 287-293, 1998
A;Title: Tissue restricted expression of two human frzbs A;Reference number: JE0174; MUID:98308108; PMID:9842118
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A; Residues: 1-295 < HUA>
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;Cross-references: UNIPROT:Q96B74; UNIPARC:UPI0000051051; DDBJ:AB017365;
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R;Koike, J.; Takagi, A.; Miwa, T.; Hirai, M.; Terada, M.; Katoh, Biochem. Biophys. Res. Commun. 262, 39-43, 1999

A;Title: Molecular cloning of Frizzled-10, a novel member of the A;Reference number: JC7086; MUID:99382237; PMID:10448064

A;Accession: JC7086
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Nature 338, 263-264, 1989
A;Title: A Drosophila tissue polarity locus
A;Reference number: S03540; MUID:89159415; I
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A;Map position: 12q24.33
C;Superfamily: fruit fly frizzled protein
C;Keywords: glycoprotein; lung; transmembrane
                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 1-581 <KOI>
A;Cross references: UNIPROT:Q9ULW2;
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A;Introns: 224/3; 264/3; 329/3; 405/1
C;Superfamily: fruit fly frizzled protein
C;Keywords: alternative splicing; transmembrane protein
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-581/Product: gene frizzled protein #status predicted <MAT>
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A; Cross-references: UNIPARC: UPI000002A9ED;
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A; Residues: 1-581 < ADL>
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A;Accession: S03540
A;Status: not compared with
                                                                                                                         A; Gene: Frizzled-10 (fzd-10)
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                                                                                                                                                                         ;Genetics:
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;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAPPVTKICAQCEMEHSADGLMEQMCSSDFVVKMRIK-----EIKIENGDRKLIGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PITISICKNIPYNMTIMPNLIGHTKQEEAGLEVHQFAPLVKIGCSDDLQLFLCSLYVPVC
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Pred. No. 5.9e-17;
5; Mismatches 78
                                                                                                                                                                                                                                                       UNIPARC:UPI000004EC92; DDBJ:AB027464; NID:g5834487;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the Frizzled
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RESULT 6
$71786
$71786
wingless receptor precursor dfz2 - fruit fly (Drosophila melanogaster)
C;Species: Drosophila melanogaster
C;Date: 12-Feb-1998 #sequence_revision 13-Mar-1998 #text_change 09-Jul-2004
C;Accession: $71786; $78444
R;Bhanot, P.; Brink, M.; Harryman Samos, C.; Hsieh, J.C.; Wang, Y.; Macke, J.P.; Andro Nature 382, 225-230, 1996
Nature 382, 225-230, 1996
A;Title: A new member of the frizzled family from Drosophila functions as a wingless; A;Reference number: $71786; MUID:96353971; PMID:8717036
                                                                                                                          Frizzled-1 protein homolog - Caenorhabditis elegans C;Specises: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 :C;Accession: T25182; T42210

R;Wild, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: FlyBase:FBgn0016797
C;Superfamily: fruit fly frizzled protein
C;Keywords: transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:Q9VVX3; UNIPARC:U
A;Note: mRNA was also sequenced
R;Bhanot, P.; Wang, Y.; Nathans, J.
submitted to the EMBL Data Library, July 1996
A;Reference number: S78444
A;Accession: S78444
submitted to the EMBL Data Library
A; Reference number: Z19989
A; Accession: T25162
A; Status: preliminary; translated
A; Molecule type: DNA
A; Residues: 1-568 KMIL>
                                                                                                                                                                                                                                       RESULT
T25162
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A;Residues: 1-416,'T',418-694 <BHW>
A;Crose-references: UNIPARC:UPI000016BDC8; EMBL:U65589; NID:g1518050; PIDN:AAC47273.1;
C;Genetics:
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A; Residues: 1-694 < BHA>
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Best Local S
Matches 61
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Best Local S
Matches 47
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                                                                                                                                                                                                                                                                                                                          MYTPICLEDYHKPLPVCRSVCERARSGCAPIMQQYSFEWPERMACEHLPLHGDPDNLCM
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                                                                                                                                                                                                                                                                                                                                                                                                               PNLRCEEITIPMCRGIGYNMTSFPNEMNHETQDEAGLEVHQFWPLVEIKCSPDLKFFLCS
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41.6%; Pred. No. 3.8e-16;
tive 20; Mismatches 40
                                                                                                        Library,
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                                              from GB/EMBL/DDBJ
                                                                                                             October
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RESULT 9

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Frizzled-2 protein - human
C;Species: Homo sapiens (man)
C;Date: 05-Feb-1999 #sequence_revision 05-Feb-1999 #text_C;Accession: JE0338
R;Sagara, N.; Toda, G.; Hirai, M.; Terada, M.; Katoh, M.
Biochem. Biophys. Res. Commun. 252, 117-122, 1998
Biochem. Biophys. Res. Commun. 252, 117-122, 1998
A;Title: Molecular cloning, defferential expression, and A;Reference number: JE0337; MUID:99032814; PMID:9813155
A;Accession: JE0338
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JE0338
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A;Introns: 158/2; 280/1; 326/2; 407/1; 447/2;
C;Superfamily: fruit fly frizzled protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:O16147; UNIPARC:UPI000008297E; EMBL: A;Experimental source: clone T23D8
A;Rocheleau, C.E.; Downs, W.D.; Lin, R.; Wittmann, C.; Bei, Y.; Cell 90, 707-716, 1997
Cell 90, 707-716, 1997
A;Title: Wnt signaling and an APC related gene specify endoderm A;Reference number: Z15051; MUID:97433081; PMID:9288750
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                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-565 < SAG>
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A; Residues: 1-568 < ROC>
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A;Status: preliminary; translated from
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                                                                                                                                                                                          13 AALALLIGALHWAPARCEEYDYYGWQABP--LHG-RSYSKPPQCLDIPADLPLCHTVGYK
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                                                                                                                                                                                                                                     64;
                                                                                                                                                                                                                                                     Similarity
                                                                                                          RMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVC--LDRPIYPCRSL 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLCSLFAPVC--LDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIA 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FSTTRKCEHI--TIPMCKNLDYNQTVFPNLLGHTTQSEAGPAIAQFNPLIKVKCSEDIRL
CERAROGCEALMNKFGFOWPERLRCEHFPRHGAEQICVGQNHSEDGAPALLTTAPP
                                  CEAVRAGCAPLMEAYGFFWPEMLHCHKFFLDNDLCIAVQFGH-----LPATAPP 176
                                                                         QTIMPNLLGHTNQEDAGLEVHQFYPLVKVQCSPELRFFLCSMYAPVCTVLEQAIPPCRSI
                                                                                                                                                       SALPRILLPLLLLPA--
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLCTVYAPVCTVLEKPIQPCRELCLSAKNGCESLMKKFGFQWPDQLDCNKFPV-TDLCVG
                                                                                                                                                                                                                              15.2%; Score 262.5; DB 2 ilarity 36.4%; Pred. No. 1.2e-15; Conservative 20; Mismatches 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #sequence_revision 05-Feb-1999 #text_change
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 263.5; DB 2
Pred. No. 9.5e-16;
4; Mismatches 57
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                                                                                                                                                     -AGPAQFHGEKGISIPDHGFCQPISIPLCTDIAYN
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                                                                                                                                                                                                                                                                       DB 2;
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                                                                                                                                                                                                                                                                         Length 565;
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                                                                                                                                                                                                                                     23;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       localization
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RESULT 11
A45054
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C;Date: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 09-Jul-2004
C;Accession: JC7127
R;Kirikoshi, H:; Sagara, N.; Koike, J.; Tanaka, K.; Sekihara, H.; Hirai, M.; Katoh, M. Biochem. Biophys. Res. Commun. 264, 955-961, 1999
A;Title: Molecular cloning and characterization of human frizzled-4 on chromosome 11q14-A;Reference number: JC7127; MUID:20012777; PMID:10544037
A;Accession: JC7127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Homo sapiens (man)
C;Date: 05-Feb-1999 #sequence_revision 05-Feb-1999 #text_change 09-Jul-2004
C;Accession: JE0337
R;Sagara, N.; Toda, G.; Hirai, M.; Terada, M.; Katoh, M.
Biochem. Biophys. Res. Commun. 252, 117-122, 1998
A;Title: Molecular cloning, defferential expression, and chromosomal locali A;Reference number: JE0337; MUID:99032814; PMID:9813155
A;Accession: JE0337
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                                                                                                                                                                                                                                                                                                                                                              A; Map position:
C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-537 < KIR>
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A; Residues: 1-647 < SAG>
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                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: UNIPROT:Q9ULV1; UNIPARC:UPI000005104E; GB:AB032417; DDBU:AB032417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      frizzled protein 4 - human
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Best Local S
Matches 54
                                                                                                                                                                                                                                                                                                                                                                                               ;Gene: FZD4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
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   intercellular
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                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                       --PIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDND---LCI 163
                                                                                                                                                                                          PLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVCLDR- 119
                                                                                                                                                                                                                            APGGVGLSLGLLLQLLLLLG------
                                                                                                                                                                                                                                                            AAGGVRTA----ALALLLGALHWAPARCEEYDYYGWQAEPLHGRSYSKPPQCLDIPADL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KFFLCSMYAPVCTVLEQALPPCRSLCERARQGCEALMNKFGFQWPDTLKCEKFPVHGAGE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RSYSKPPQCLDIPADLPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDT 104
                                                                                                                                                          SMCQNLGYNVTKMPNLVGHELQTDAELQLTTFTPLIQYGCSSQLQFFLCSVYVPMCTEKI
                                                                                       NIPIGPCGGMCLSVKRRCEPVLKEFGFAWPESLNCSKFPPQNDHNHMCM 159
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fruit fly f
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    human

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                                                                                                                                                                                                                                                                                                                                                            n q14 - q21
frizzled protein
                                                                                                                                                                                                                                                                                                              14.7%; Score 253.5; DB 32.0%; Pred. No. 7.1e-15;
   transducer
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                                                                                                                                                                                                                                                                                               Mismatches
   ç
   transmitter
                                                                                                                                                                                                                            -----PARGFGDEEERRC--DPIRI 50
                                                                                                                                                                                                                                                                                                                              DB 2;
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RESULT 13
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R:Sato, A.; Kojima, T.; Ui-Tei, K.; Miyata, Y.; Saigo, K. Development 126, 4421-4430, 1999
A;Title: Dfrizzled-3, a new Drosophila Wnt receptor, acti. A;Reference number: Z21689; WUID:99429803; PMID:10498678
A;Accession: T37325
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: Cfz2
C;Superfamily: fruit fly frizzled protein
C;Keywords: receptor; signal transduction; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: 1-550 <SAT>
A;Cross-references: UNIPROT:Q9U8U6; UNIPARC:UPI000007B5CC; EMBL:AB026113; NID:g5931529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        wingless protein receptor Cfz2 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change C;Accession: T37325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: UNIPARC:UPI0000178F60
A;Experimental source: UMR 106 osteosarcoma cell line
A;Note: sequence extracted from NCBI backbone (NCBIP:120154)
C;Superfamily: fruit fly frizzled protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: preliminary; not compared with A;Molecule type: nucleic acid A;Residues: 1-641 <CHA>
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A;Title: Two homologs of the Drosophila polarity gene frizzled (fz) are widely expressed
A;Reference number: A45054; MUID:93094228; PMID:1334084
A;Accession: A45054
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C;Date: 30-Apr-1993 #sequence_revision 18-Nov-1994 #text_change 02-Mar-2001
C;Accession: A45054
R;Chan, S.D.; Karpf, D.B.; Fowkes, M.E.; Hooks, M.; Bradley, M.S.; Vuong, V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                                 Query Match 14.0%;
Best Local Similarity 32.6%;
Matches 56; Conservative 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RGISIPHGYCQPISIPHCTDIAYNQTIMPNHHGHTNQBDAGHEVHQFYPHVKVQCSAEL 160
                                                    LCEAVRAGCAPLMEAYGFPWPEMLHCHKFPLDNDLCIAVQFGHLPATAPPVT 178
                                                                                                                    MTSFPNSYGHEKQEEAGLEVHQFYPLVEVGCFQHLKFFLCTMYTPICQENYDKPILPCME
                                                                                                                                                                           RMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVC---LDRPIYPCRS 126
                                                                                                                                                                                                                                                                                                VRTAALALLIGALHWAPARCEEYDYYGWQAEPLHGRSYSKPPQCLDIPADLPLCHTVGYK 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RSYSKPPQCLDIPADLPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDT 104
LCVEARSKCSPIMAKYGFRWPETLSCEALPKMSD---QMSTGNICA-APPDT
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                                                                                                                                                                                                                                                                                                                                                       23;
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                                                                                                                                                                                                                                                                                                                                                    Score 243; DB 2; Length 550;
Pred. No. 6.4e-14;
23; Mismatches 63; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
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147
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human

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RESULT 15
T31690
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            frizzled-related protein - rat (;Species: Rattus norvegicus (Norway rat) C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Jul-2004 C;Accession: JC7735 K.W.; Wong, V.K.W.; Hsiao, W.L.W. R;Yam, J.W.P.; Chan, K.W.; Wong, V.K.W.; Asiao, W.L.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
JC7735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Homo sapiens (man)
C;Date: 08-Sep-2000 #sequence_revision 08-Sep-2000 #text_change 02-Mar-2001
C;Accession: JC7312
R;Sala, C.F.; Formenti, E.; Terstappen, G.C.; Caricasole, A.
Biochem. Biophys. Res. Commun. 273, 27-34, 2000
A;Title: Identification, gene structure, and expression of human frizzled-3 (FZD3).
A;Reference number: JC7312
A;Accession: JC7312
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C; Superfamily: fruit fly frizzled protein
C; Keywords: G protein-coupled receptor; ti
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A;Gene: 148/3; 175/3
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A;Experimental source: brain
C;Comment: This protein, a seven-transmembrane receptor belonging to the frizzled family
hypothetical protein F27E11.3 - Caenorhabditis C;Species: Caenorhabditis elegans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-197 < YAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nositol levels in cells.
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;Date: 08-Sep_2000 #sequence_revision 08-Sep-2000 #text_change 02-Mar-2001
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Best Local Similarity
Matches 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;Gene: fzd3
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                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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Best Local Similarity
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                                                                                                                                                                                         175
                                                                                                                                                                                                                                                                                    117
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                                                                                                                                                                                                                                     89
                                                                                                                                                                                                                                                                                                                                 29 IPMCRHMPWNITRMPNHLHHSTQENAILAIGQYEELVDVNCSSVLSFFLCAMYAPICTLE
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                                                                                                                                                                                                                                                                                                                                                                             60 LPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVC---
                                                                                                                                                                                                                                                                                                                                                                                                                               49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PADLPLCHTVGYKRMRLPNLLEHESLAEVKQQASSWLPLLAKRCHSDTQVFLCSLFAPVC 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PITERMCQDLPYNTTFMPNEENHYDQQTAALAMEPFHPMVNLDCSRDFRPFECALYAPIC 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEYGRVTLPCRRLCQRAYSECSKLMEMFGVPWPEDMECSRFP 131
                                                                                                                                                                                    PPVTKICAQCEMEHSADGLMEQMCSSDFVVKMRIKEIKIENGDRKLIGAQKKKKLLKP 232
                                                                                                                                                                                                                                        FLHDPIKPCKSVCQRARDDCEPLMKMYNHSWPESLACDELPVYDRGVCIS-
                                                                                                                                                                                                                                                                                  -LDRPIYPCRSLCEAVRAGCAPLMEAYGFPWPEMLHCHKFPL-DNDLCIAVQFGHLPATA 174
                                                                                                                                          -----PEAIVTDLPEDVKWIDITPDMMVQERSFDADCKHLSPDRCKCKKVKP 185
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                                                                                                                                                                                                                                                                                                                                                                                                                                                11.7%; Score 202; DB 2
27.5%; Pred. No. 1e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                               27;
                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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                        elegans
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C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 02-Mar-2001 C;Accession: T31690
R;Wamsley, P.; Keppler, D.
submitted to the EMBL Data Library, July 1997
A;Description: The sequence of C. elegans cosmid F27E11.
A;Reference number: Z21069
A;Accession: T31690
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                                                                                                                                                                                                                                                                                                       A;Introns: 28/3; 454/1; 520/1; 562
C;Superfamily: fruit fly frizzled
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A;Experimental source: strain Bristol N2; clone F27E11
C;Genetics:
A;Gene: CESP:F27E11.3
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A; Residues: 1-605 < WAM>
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A; Introns: 28/3; 454/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                           Matches
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Best Local S
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Local Similarity 37.0%; Pred. No. 7.3e-10;
hes 40; Conservative 16; Mismatches 45
                                           131 VRAGCAPLMEAYGEPWPEMLHCHKFPLDNDLCIAVQEGHLPATAPPVT 178
65
                                                                                                                                                     74 PHILEHESLAEVKQQASSWIPILAKKCHSDTQVFLCSLFAPVC---LDRPIYPCRSLCEA 130
ARSKCSPIMAKYGFRWPETLSCEALPKMSD---QMSTGNICA-APPDT 108
                                                                                                    PNSYGHEKQEEAGLEVHQFYPLVEVGCFQHLKFFLCTMYTPICQENYDKPILPCMELCVE 64
                                                                                                                                                                                                                                                                                                                                          520/1; 562/1
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Search completed: March 22, 2006, 22:43:02 Job time : 41 secs

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